



LIFE02 NAT/LV/008498

FINAL REPORT

Covering the period from 01.04.2002 to 30.06.2006

Date of the report: 11.10.2006

## PROTECTION AND MANAGEMENT OF COASTAL HABITATS IN LATVIA

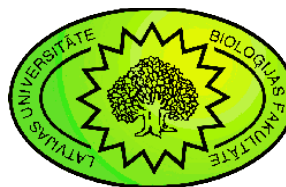
### Project

<b>Project location</b>	Latvia, entire seacoast – appr. 500 km long and 300 m wide strip including 4 Natura 2000 sites
<b>Project start date:</b>	01.04.2002
<b>Project end date:</b>	30.06.2006
<b>Total Project duration (in months)</b>	51 months
<b>Total budget</b>	1 666 151.60 €
<b>EC contribution:</b>	1249613.70 €
<b>(%) of total costs</b>	75 %
<b>(%) of eligible costs</b>	75 %

### Beneficiary

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## 1. KEYWORDS

Keywords: Sea coast, coastal habitats, Latvia, Baltic Sea, embryonic dunes, foredunes, grey dunes, wooded dunes, coastal meadows, digital mapping, functional zoning, Natura 2000 management plans (conservation plans), micro-reserves, small-scale tourism infrastructure.

There are very few abbreviations in the report, and they are explained in the text.

Project abbreviation: LV coastal habitats.

## 2. EXECUTIVE SUMMARY

LIFE-Nature project “Protection and management of coastal habitats in Latvia” (LIFE02 NAT/LV/008498). Final report, covering the period from 01.04.2002 to 30.06.2006.

### Project aim

Conservation, restoration and sustainable management of **coastal** habitats and species of Community importance (23 habitat types (7 of them EU priority) and 4 plant species listed in the Habitats Directive, 9 habitat types according to the Bern Convention, and 16 species listed in Birds Directive).

### Project outputs

Database of coastal landowners and their interests regarding coastal development; database and multileveled digital map of habitats of the project area (32 000 ha); digital functional zoning map; network of microreserves; management plans for 4 Natura 2000 sites; conservation measures to protect habitats of Community importance - tested in 12 demonstration sites; 200 information boards and 620 information signs; 2 educational nature paths, 11 seminars organised.

### Deliverables

7 booklets, 20 leaflets, 2 films, 4 management plans for Natura 2000 sites, digital map of coastal habitats of Community importance and database of their protection measures, layman’s report, final report.

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7 booklets, 20 leaflets, 2 films, 4 management plans for Natura 2000 sites, digital map of Community importance coastal habitats and database of protection measures, layman’s report, final report.

Product	Action	Completed
1 <sup>st</sup> booklet about LIFE project objectives and actions.	E3	30.01.2004
3 one-page leaflets about coastal habitats of Community importance.	E2	29.04.2003
Film about coastal habitats in Rīga.	E5	15.01.2004
Management plan for Piejūra Nature Park.	A7	15.04.2004
Management plan for Bernāti Nature Park..	A8	08.04.2004
Management plan for Užava Nature Reserve.	A8	14.04.2004
Management plan for Vidzemes Akmeņainā Jūrmala Nature Reserve.	A9	19.03.2004
3 one-page leaflets about coastal habitats of Community importance.	E2	30.06.2005

2 <sup>nd</sup> booklet about coastal habitats of Community importance and their sustainable management.	E3	16.07.2004
Coloured booklets about coastal habitats of Community importance in Liepāja region, Rīga region and North Vidzeme Biosphere Reserve.	E3	10.06.2006
Digital map and database with protection measures in coastal habitats of Community importance.	A3	31.12.2005
3 one-page leaflets about coastal habitats of Community importance.	E2	31.12.2005
Film about coastal habitats in Latvia.	E5	31.05.2006
11 one-page leaflets about coastal habitats of Community importance.	E2	10.06.2006
Coloured booklet for schools about coastal habitats of Community importance.	E3	31.08.2005
3 <sup>th</sup> booklet about achievements of project and management of coastal habitats of Community importance in the future.	E3	16.07.2004
Layman's report.	E9	10.06.2006
Final report.	F1	11.10.2006

### Following reports have been sent:

Report	Date of sending	Covered period
First progress report without payment request.	29th May 2003	1st April 2002 – 31 May 2003
Second progress report without payment request.	2nd July 2004	1st June 2003 – 21 June 2004
Interim report with payment request.	12th January 2005	1st April, 2002 – December 31, 2004
Third progress report without payment request.	28th December 2005	1st January, 2005 – December 20, 2005

### Summary of chapters

Protection and management of coastal habitats in Latvia, LIFE02 NAT/LV/008498, final report.

**Introduction.** Project aim is the conservation, restoration and management of habitats and species of Community importance in entire seacoast of Latvia (appr. 300 m wide terrestrial belt). Main threats – various aspects of inappropriate management. Expected results – various conservation measures as well management plans for Natura 2000 sites, digital maps, planning of appropriate nature protection in whole project area as well public awareness programmes.

**LIFE project framework.** Main project actions – mapping and evaluation of habitats; planning; restoration of coastal meadows and various types of dunes; dissemination of information. Project beneficiary – Faculty of Biology, University of Latvia. Project partners – Liepāja Regional Environmental Board and North Vidzeme Biosphere Reserve. Project has 12 cofinanciers.

**Progress, results.** A. Database of landowners and their interests; digital map and functional zoning of habitats; management plans for 4 Natura 2000 sites; network of microreserves. C. Restoration of grey dunes (cutting of trees and invasive species), restoration of coastal meadows, dune strengthening. D. Mowing and grazing of grasslands, ensuring adequate control. E. Information boards and signs, booklets, leaflets, seminars, conferences, films, website. Management measures in 12 coastal municipalities – Rīga, Lapmežciems, Medze, Saulkrasti, Pāvilosta, Ainaži, Salacgrīva, Roja, Užava, Carnikava, Rucava, Jūrmala. F. Project administration, audit, steering group. Monitoring.

**Project evaluation and conclusions.** The main project successes was the large-scale application of habitat maps, protection of habitats of Community importance inside and outside of Natura 2000 sites, successful recovery of habitats, raised public awareness. Project objectives were reached.

**After-LIFE conservation plan.** Various institutions and experts will use habitat maps. Additional technical projects are being implemented in scope of other projects. Management plans for Natura 2000 sites are being implemented. Further management of grasslands and maintenance of constructions built by LIFE project is ensured with contracts.

This report has 11 **annexes**. With previous reports 79 annexes were sent.

### 3. INTRODUCTION

The **aim** of the project is the conservation, restoration and sustainable management of coastal habitats and species of Community importance (23 habitat types (7 of them EU priority) and 4 plant species listed in the Habitats Directive, 9 habitat types according to the Bern Convention, and 16 species listed in Birds Directive).

**Objectives:** development of the basic framework for sustainable management of the coastal protection belt of the Baltic Sea in Latvia; promotion of a network of protected nature areas and micro-reserves of the Baltic Sea coast; raising of public awareness regarding the need for protection of habitats of Community importance.

Project **area** is the entire Baltic Sea coast – appr. 500 km long and 300 m wide coastal zone beginning from the waterline in the terrestrial direction. In Latvia, this territory is traditionally protected as the Baltic Sea coastal protection belt. In areas where threatened habitats of Community importance (dunes, coastal meadows) continue outside of this belt, project actions extend to cover the entire areas of the habitats. Appr. 45 % of the project territory is included in 14 Natura-2000 sites.

Between 1945 and 1990, access to the seashore in Latvia was restricted, because the western boundary of Latvia was also the border of the USSR. Access was allowed only in particular locations. While this system degraded the traditional economical and cultural environment, it ensured that natural habitats were protected and that building was restricted in the largest part of the coast, in contrast with most of the European countries. These restrictions were removed after renewal of independence in 1991. Now, the number of visitors in the sea coast is growing exponentially. Natural habitats suffer both from the activities of tourists and from the inappropriate management. Impact to coastal habitats is increasing, causing destruction of ecosystem structure and promoting erosion.

Main **threats** to the coastal habitats in Latvia are:

- Degradation of coastal natural habitats by recreation and activities of tourism;

- Deterioration of coastal ecosystem by motorised vehicles;
- Destroying of indigenous flora and vegetation by aggressive alien species;
- The reduction of area of grey dunes;
- Decreasing area of semi-natural meadows;
- Decrease of forest biological diversity resulting from inappropriate management;
- Decrease of area of habitats of Community importance due to building activities and inappropriate coastal management;
- Deterioration of endangered habitats in protected nature areas due to lack of management plans;
- Deterioration of natural habitats due to low public awareness.

The main **results expected** were:

- Conservation measures to protect habitats of Community importance - tested in 14 demonstration sites involving the implementation of habitat protection/management;
- Proposed Natura 2000 site network evaluated; possible amendments proposed;
- Potential Natura 2000 sites in the coastal protection belt identified and assessed;
- Digital maps, data bases, functional zoning and appropriate protection measures for coastal habitats of Community importance created and stored in municipalities and governmental environmental institutions;
- Plans for appropriate protection measures and management for 4 protected nature areas;
- Conducted public awareness programmes for local residents, visitors, land owners, decision makers, business structures (200 information boards, 620 information signs, educational nature path established, 12 seminars held, 7 booklets, 20 leaflets, 1 book published, 2 films produced).

#### **4. LIFE PROJECT FRAMEWORK**

**Main actions of the project are:**

- Mapping and evaluation of habitats of Community importance in the whole coastal protection belt;
- Planning of appropriate protection and management measures in protected nature areas where currently no management plans exist;
- Implementation of management measures in the coastal zone areas with high and increasing visitors activity;
- Restoration and maintenance of coastal meadows and grey dunes in areas where immediate protection actions are required (cutting of trees, reeds and bushes, mowing, grazing); removal of aggressive alien plant species (in some areas where they are rapidly expanding and destroying indigenous flora);
- Preparation and dissemination of information about the LIFE project and threatened coastal habitats of Community importance and their protection.

## Working method

1. Habitat mapping and evaluation (status of protection, threats, management necessity).
2. Planning activities: elaboration of functional zoning, management plans for Natura 2000 sites, technical designs for small-scale infrastructure, building permits; monitoring. Dissemination of information on habitats etc.
3. Habitat restoration and management: cutting of shrubs and reed in grasslands, cutting of invasive species in various types of dunes; maintenance (mowing and grazing) of grasslands, construction of small-scale infrastructure for visitors. Dissemination of information on habitat management.

## Presentation of Beneficiary, partners and project organisations.

Beneficiary – Faculty of Biology, University of Latvia (Fig.1).

Partner 1. North Vidzeme Biosphere Reserve is a state institution, subordinated to the Ministry of Environment. Responsible mainly for the activities in the Northern part of the project area.

Partner 2. Liepāja Regional Environmental Board is a state institution, subordinated to the Ministry of Environment. Responsible mainly for the activities in the Southern part of the project area.

Local coordinators in each participating municipality and three regional coordinators organised the practical works on sites.

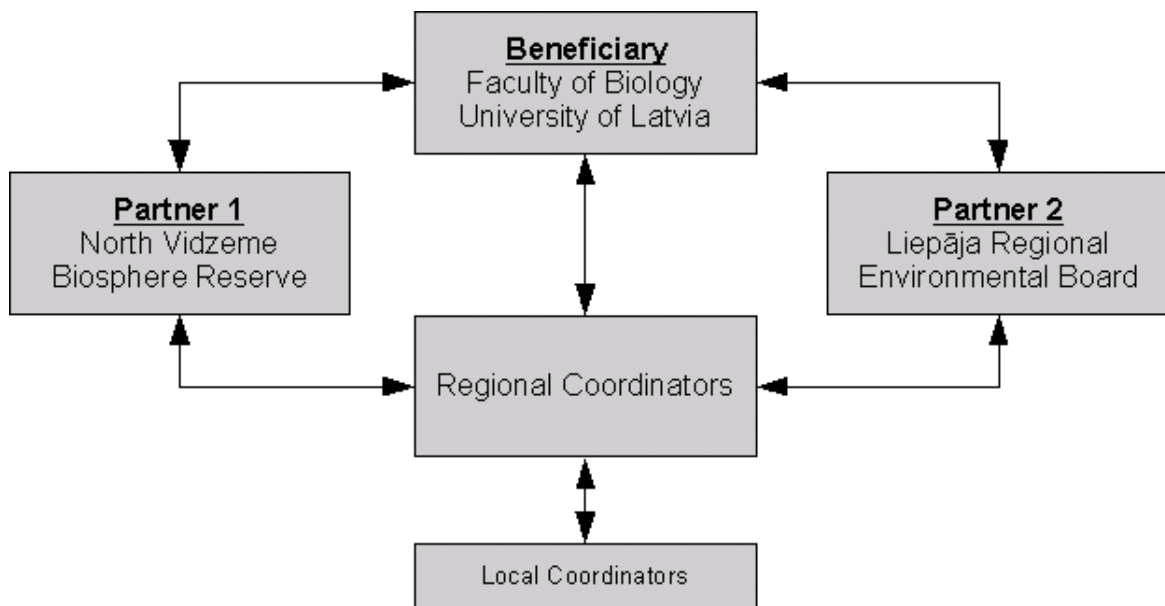


Fig.1. Project management.

Following project **modifications** were accepted by the Commission on 8th December 2005:

- The project is prolonged by 6 months. The new completion date is 30.06.2006.
- A new co-financier, the Latvian Environmental Protection Fund, is added to the project. The Fund contributes to the project by EUR 69 260 and the beneficiary's contribution is reduced accordingly.



- Nīca and Kolka municipalities are withdrawn as co-financiers to the project. The initially foreseen contribution of these municipalities to the project is deducted from the project funding.
- Actions C7, E11, and parts of action E20 (activities related to the Nīca municipality) are cancelled. The budget of action C7 is entirely shifted to the budget of action C1. The costs of action E11 (EUR 35 090) and activities of action E20 (EUR 14 875) are deducted from the project budget.

## 5. PROGRESS, RESULTS

### A. PREPARATORY ACTIONS, ELABORATION OF MANAGEMENT PLANS AND/OR ACTION PLANS

#### **Action A1. Preparation of a database of landowners and their interests regarding land use and coastal development.**

**Time plan:** April 2002 – June 2003.

**Planned.** Database and questionnaire of landowners in coastal protection belt. This action consists of:

1. building database of addresses of the coastal landowners,
2. preparation and sending questionnaires, processing results.

**Results.** The action consists of 2 parts:

1. The **database of landowners.** The information (10 100 cadastral units) was obtained from the State Land Service (from 4 regional boards). In total, 85% of all land properties are private, and there are 6751 private land properties in the project area. Addresses were used for the sending of questionnaire and also for analysing land property information in proposed Nature 2000 sites and for contacting landowners during the preparation of management plans for Natura 2000 sites (Actions A7 – A10).

2. **Questionnaire** (36 questions, attached to the second progress report) was prepared in cooperation with municipalities (they suggested several questions). Questionnaires were sent to 6272 landowners (not to 6751 because there were also landowners with several properties) Along with the questionnaire, a leaflet about the LIFE project was sent. 1581 filled in questionnaires were received, 191 out of them were received as unusable because of misdirected addresses (wrong or incomplete data were received from the State Land Service).

The results of questionnaires clearly demonstrated several gaps of the general public knowledge especially concerning protection and management of dunes, grasslands and forests as well on legislation concerning nature protection. We have contributed a lot to fill these gaps by our project activities - booklets, leaflets, seminars, website. Textual information of the project website was almost fully based on the questions and misunderstandings received from the questionnaires.

For the processing of data, expert of statistics was involved (assoc.prof.G.Pospelova).

Results were published in leaflet (Action E2), reported in 1 local and 1 international seminar (Action E22).

With a help of the questionnaire (Action A.1.), most of the landowners were involved in the project. Many of them responded that the questionnaire encouraged their thinking on the sustainable development of the coastal areas and conservation of nature values.

**Complications.** This process took long time because the coastal protection belt borderline was not indicated and marked in a data base of State Land Service. After signing of several contracts between University of Latvia and State Land Service, the border was entered in the database and land properties were sorted. (Before development of the project application, State Land Service was certain that this information can be found at the Ministry of Environment, and the Ministry of Environment was confident that this information is being stored at State Land Service.) However, due to the project considerable efforts the action was successfully completed and the declared aims reached.

**Continuation.** The Ministry of Regional Development and Local Governments is using the results of questionnaire (the opinion of landowners) for the elaboration of the National Spatial Plan. Municipalities are widely using the results of the questionnaire for the elaboration of their physical plans.

**Additional information.** The questionnaire was attached to the second progress report. Results were presented in the interim report and third progress report. Summary of results of questionnaire is published on project website <http://piekraste.daba.lv/>.

### **Action A2. Digital mapping of habitats of Community importance in the coastal protection belt.**

**Time plan:** April 2002 – June 2004.

**Planned:** Mapping of habitats in whole project area, scale 1:10 000.

**Results.** Digital map is completed.

**Description of the mapping process.** A reference images orthophotos were used, special map system for the field works elaborated. Experts did practical habitat mapping and marked the borders of habitats. The following items was recorded for every single polygon: habitat type, value (in terms of biodiversity), disturbances, necessity for restoration and management; protection (habitats and species of Community importance; protected habitats and species of national importance).

Digital maps were elaborated and attribute database created. The accuracy of mapping depends on the ground resolution of orthophotos (1 m, for Rīga and Jūrmala – 0.25 cm), on the level of generalisation of topographic maps (1 : 10 000, for Northern part of Latvia – 1 : 25 000), and on the spatial accuracy of GPS (20 – 30 m). The mapped habitats cover approx. 32 000 hectares (which is 0.5% of the area of Latvia).

The experts cross-checked digital maps and corrected errors found. In **December 2004**, habitat maps (digital version) were sent to all coastal municipalities. Moreover, several state institutions were interested, asked and received the maps – State Land Agency, Regional Environmental Boards, Ministry of Environment, Ministry of Regional Development and Local Governments and other.

Habitat maps were acknowledged and used by all municipalities because in most of them elaboration or revision of physical or elaboration of detailed plans was ongoing.

**Variations.** Action is completed, but sending of maps to municipalities was delayed for 5 months. Reasons: 1. waiting for the revision of Regulations of the Cabinet of Ministers “Regulations on the List of Protected Habitats” (2000) (new regulations were issued, with new list of protected habitats); 2. technical problems during merging of the LIFE project habitat maps and maps used by State Forestry Service (maps used by forestries were not digitalised at all).

**Additional value.** This action has an innovation value and socio-economic effect because for the first time such a map has been created in Latvia. Further, the requirements for the physical planning in respect to natural habitats were raised in Latvia. Now the use of the project habitats maps for physical planning is being required and supervised/monitored by relevant state institutions (Ministry of Environment, Ministry of Regional Development and Local Governments, Regional Environmental Boards). Maps are being used also by private landowners.

**Additional information.** Maps (CD and outprints) were attached to the Interim report. In 2005, maps have been published on project website (<http://piekraste.daba.lv/EN/biotopi/>). Final version is attached in CD Annex 1.

Coordinate system: LKS-92 with false Northing – 6000000.

Copyright information. This map could be freely distributed and under following conditions: 1) the map should contain the copyright message; 2) all changes made to the map must be clearly stated; 3) this map and its derivatives must be free of charge; 4) this map could not be included in commercial software.

### **Action A3. Plans of protection measures (functional zoning) for habitats of Community importance in the coastal protection belt.**

**Time plan:** October 2003 – December 2005.

**Planned:** elaboration of functional zoning for whole project area. Functional zoning is a map, based on the habitat maps (Action A.2) and the integral evaluation on the actual and potential use of the territory, evaluation of area in total.

**Results.** In map, following zones were designed:

- zone of strict protection (habitats of Community and national importance; habitats of protected species);
- zone of nature protection (natural, undisturbed, sensitive areas),
- zone for recreation (sites where establishment of recreation infrastructure is necessary for the protection of habitats);
- landscape protection zone (areas dominated by agriculture),
- neutral zone (modified areas);
- zone of protected nature areas.

Draft versions of functional zoning were communicated with municipalities, to ensure that it will be used. Zoning was finished in January 2006 and published on project website in March 2006.

**Additional results.** The use of functional zoning maps for municipalities physical planning is being required and supervised/monitored by state institutions (Ministry of Environment, Ministry of Regional Development and Local Governments, Regional Environmental Boards).

**Additional information.** Versions of functional zoning were attached in second, third and interim reports. Final version is included in the habitat map (Action A.2) as an additional attribute data layer. Maps have been published on project website (<http://piekraste.daba.lv/>).

#### **Action A4. Making agreements and signing contracts with subcontractors and local farmers.**

**Time plan:** October 2002 – June 2006.

**Planned:** contracts with subcontractors and farmers.

**Results.** Contracts of cooperation with co-financiers were signed until April 2004.

There were very many contracts with subcontractors, for example, for the delivery of materials, for mowing of reeds, cutting of bushes, contracts for building etc.

For the continuation of habitat management, contracts of cooperation were signed.

- In Rīga, the contract between the Rīga City Council, Rīga National Zoological Garden and the University of Latvia was signed.

- In Salacgrīva, the contract between Salacgrīva municipality, farm z/s “Ķikupvēveri 1” and University of Latvia was signed.

- In Jūrmala, contract for the continuation of building works after the project time as signed (explained in Action E21).

**Additional information.** Copies of recently signed agreements and contracts (all types, with shortened English translation) were attached to the second and third progress reports. Copies of the contracts for continuation of habitat management mentioned above are attached in Annex 2.

#### **Action A5. Training of habitat experts.**

**Time plan:** April 2003 – June 2003.

**Planned:** Preparation for Action A2 - experts learn the method of habitat mapping.

**Results.** 18 experts learned principles of classification and habitat evaluation. Seven experts learned the method in summer 2002 (training for habitat mapping in Piejūra Nature Park, Action A7). They visited various sites at the coast and evaluated them together. All habitat experts were botanists, which previously have been taking part in various projects on habitat evaluation.

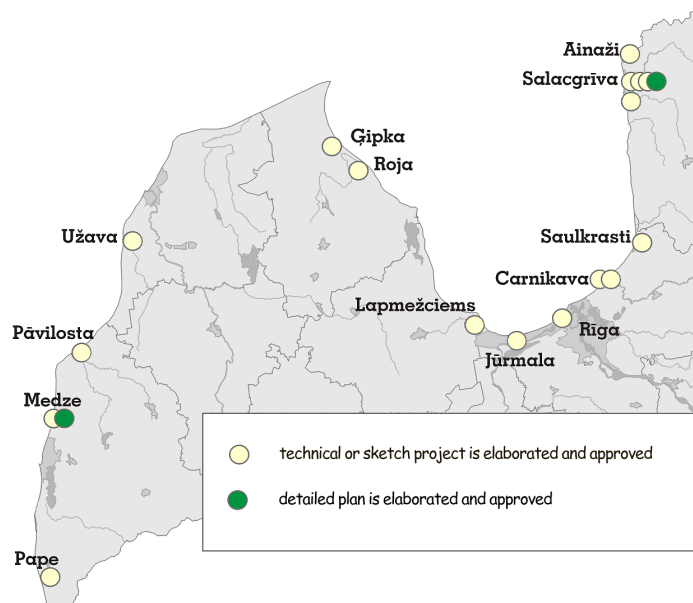
Based on the experience, gathered in year 2002, the classification of habitats and the method of evaluation were improved for the year 2003. In May, 2003, the seminar about habitat mapping and the field training for all 17 experts were organised. Computer specialists participated in the training as well. In total, seven more experts were trained compare to that what was initially planned.

**Additional information.** Pictures of seminars – in Annex 3.

### **Action A.6. The preparation of technical projects (technical designs) for restoration and management of coastal habitats of Community importance.**

**Time plan.** April 2003 – September 2005.

**Description.** The elaboration and approval of technical designs is a necessary prerequisite for the restoration and management works which include building of small-scale infrastructure (boardwalks, stairs, barriers, resting sites, car parking sites etc.).



**Results.** In total, 8 technical designs, 2 detailed plans and 5 sketch designs were elaborated and approved for 12 municipalities (Fig.2). Work was organised in cooperation with 13 local project coordinators.

This action took much larger effort and time than expected. However, aims were reached, and action was finished on December 2006.

The procedure and various constrains in the process of elaboration of technical designs were particularly explained in the Interim report.

Fig. 2. Sites where detailed plans, technical and sketch designs were elaborated

Time delay was mainly because of the long procedure of elaboration of technical projects which include:

- the submission of application at the Building Board of Municipality;
- the acquisition of the requirements for planning and architecture from the Building Board of Municipality, (Building Board of Municipality is issuing these requirements and setting the type of project (sketch or technical project) which should be designed);
- the acquisition of technical requirements from state and municipality institutions of the municipality as required by the requirements for planning and architecture;
- the preparation of the contract on the design and approval of the technical or sketch project;
- the elaboration of the technical or sketch project;
- the approval of the technical or sketch project as it requested by Building Board of the Municipality.

Additional requirements can be set by a single municipality and additional requirements must be applied according to the “Law on the Protected Belts”. Due to the fact that many municipalities did not have the authorised physical plans (Aināži (E16), Lapmežciems (E12), Medze (E13), Nīca (E20), Salacgrīva (E16), Carnikava (E19)) the public discussion on building concept was required and had to be performed.

**Main constraints.** During the LIFE project implementation the “Law on the Protected Belts” has been revised several times, as well as several Regulations of the Cabinet of Ministers

concerning protected habitats, protected nature areas, development of physical plans etc. were amended.

At the same time, the interpretation of legal acts differed between the municipalities and between various institutions. Therefore, the planning of time and financial resources for the development of technical projects was extremely difficult and complicate.

Unexpectedly long time was necessary for the state institutions to proceed with documents (in some cases, the issue of technical requirements took up to 6 months). There were no common regulations and experience for the establishment of small (up to 50 cars), seasonal car parking sites in Latvia at all. As the result, regional environmental boards issue different requirements. In one case (Ainaži, Action E 16) requirements similar to those as for building of a small petrol station were issued at the beginning. This problem was solved by tight consultations with Valmiera Regional Environmental Board, State Environmental Office and EIA State Bureau, and the issue of reasonable requirements was reached.

Nevertheless, all necessary technical requirements/provisions were received, elaborated and approved in accordance to the existing legislation.

### **Results in Rīga (related actions C2, C3, E10, D1).**

In Rīga, various management works were planned in accordance to Natura 2000 site Piejūra Nature Park management plan that was elaborated by our project (Action A7).

Technical design was elaborated and approved by Rīga City Building Board on 2th May 2005.

Besides the technical solutions of small facilities for visitors, the technical design included the topographical study of the area and the geotechnical study for the area of bird watching tower (requested by Rīga Building Board).

Works were planned in 3 sites, which are located in Rīga, Piejūra Nature Park.

1. Vakarbuļļi Nature Reserve: resting site, shelter and fencing for cattle, information board;
2. Daugavgrīva Nature Reserve – shelter and fencing for cattle, bird watching tower, educational path, boardwalks covered with gravel and wood, information boards and signs;
3. Vaļņu Kāpa – boardwalks covered with wood, wooden chips, gravel as well information boards and signs.

### **Results in Salacgrīva (related actions C6, D1, E16).**

1. The **detailed plan** (area of 15 hectares including dune habitats) was elaborated in year 2005, **approved** by Salacgrīva Building Board on 16<sup>th</sup> November 2005. In this plan, the system of small-scale infrastructure for visitors is proposed – car parking site, boardwalks, resting sites and other necessary services.

2. **Four sketch designs were elaborated, approved** by the Salacgrīva Building Board:

1. Resting sites in Zvejnieku Parks (approved on 5th April, 2005);
2. Small scale infrastructure in Zvejnieku Parks (approved on 8th August 2005);
3. Boardwalks in wooded dunes at the beach of Salacgrīva Town (approved on 3rd June 2005);
4. Educational path with boardwalks in wooded dunes at the beach of Salacgrīva town (approved on 10th December 2005).

**Complications and variations.** During the elaboration of detailed plan, it was clarified that it is not possible to build the car parking site in Salacgrīva during the project time. It is located in

the “forested land” in the coastal protection belt. It was not possible to find another site as all available municipal land is located in forest land in the coastal protection belt. According to the “Law on protected belts”, the procedure of “land transformation” is required in this case. It is a very long procedure. Therefore, it is not possible to design and construct the car parking site in Salacgrīva during the project duration time. It was decided to replace the car parking place with measures of the rising of public awareness – education path with boardwalks.

#### **Results in Ainaži (related actions C6, D1, E16).**

Works were planned in accordance to management plan of Nature 2000 site “Randu Pļavas”.

The **technical design of all building works was elaborated and approved** on 21 November 2000 by Salacgrīva Building Board.

**Delays.** Elaboration of technical design was delayed due to conditions independent from the project team:

- the land property issues were not adjusted (the land property status was not fixed in appropriate documents) in the municipality,
- state institutions delayed the issue of technical requirements (for example, the time between the request and receiving of a document was 2.5 or 3.5 months);
- Regional Environmental Board requested strict requirements for the collection and treatment of sewage water from the car parking site. Therefore, unplanned works for the study on technologies as well as additional consultations with state institutions were necessary.

#### **Results in Jūrmala (related actions C8, E21).**

All works were planned in accordance to the management plan of Natura 2000 site Nature Park “Ragakāpa”.

1. For the building of **network of boardwalks, stairs, resting sites, information boards** the technical designs were elaborated and approved in year 2004 (reported in Interim report), implemented in years 2004 and 2005.

2. In 2005, technical design for the **observation tower** was elaborated by SIA “Archis”, accepted by Jūrmala Building Board on 2nd September 2005. The planned tower will be 30 metres high, located nearby boardwalks, which have been constructed by the LIFE project. The building of tower will be organised by Jūrmala City and will be a kind of the added value to the LIFE project activities.

#### **Results in Lapmežciems (related actions C E12).**

Technical design was approved on 7th June, 2005.

#### **Results in Medze (related action E13).**

In Medze, before the elaboration of technical design and receiving of the technical requirements (reasons described in Interim report, Action A6) elaboration and approval of the detailed plan was required

1. The **detailed planning** for area of 25 hectares was elaborated, and approved on 06.10.2005 by Medze Municipal Board. In the detailed plan, the system of small-scale infrastructure system for the protection of grey dunes and white dunes was planned.

2. The **technical design** was elaborated and approved on 21st November 2005 by Joint Building Board of Liepāja District.

**Results in Saulkrasti (related action E14).**

Technical design was approved on 30th April 2004.

**Results in Pāvilosta (related action E15).**

Technical design for all building works was elaborated and approved by the Joint Building Board of Liepāja District on 16th March, 2005.

**Results in Roja (related action E17).**

Technical design was approved on 20th May 2004.

**Results in Užava (related action E18).**

Sketch project (sketch design) was elaborated and approved by the Building Board of the Ventspils District on 21st April 2005. All works were planned in accordance to Užava Nature Reserve management plan which was elaborated by our project (Action A8).

**Results in Carnikava (related action E19).**

The elaboration of technical designs was delayed because the Carnikava Building Board required the signing of contract between the University of Latvia and Joint Stock Company "Latvian State Forests" (landowner of the site which is managed by LIFE project). The contract was signed on 20th April, 2005. Technical designs were approved by Carnikava Building Board on 22th August, 2005.

Technical designs for 2 subsites (Mežciems and Lilaste) in Carnikava were elaborated.

**Results in Rucava (related action E20).**

Technical design was approved on 30th June 2004.

**Added value for action C6.** Designs were elaborated by architects in cooperation with local coordinators in municipalities. Now, there are experienced people in a field of small infrastructure building for nature conservation purposes in 12 local municipalities, and it ensures the quality of further similar projects. The knowledge of local coordinators and architects is already evaluated very high by people who are preparing similar projects.

**Additional information.** Copies of all technical designs were attached to the second and third progress reports and to interim report. Explanation of Natura 2000 status of the project sites (as asked in letter 30.03.2006 DG ENV/D1/SL.nb D920060 6000) - in introduction to actions E10, E12-E21; maps in Annex 10.

**Introduction to actions A7, A8, A9: management plans for protected nature areas.**

Management plans (nature conservation plans) in Latvia are elaborated in accordance to Regulation of the Ministry of Environment "Recommendations on the elaboration of management plans for protected nature areas" (2002). Regulations determine both the content of plan (description and evaluation of territory) and the procedure (meetings of steering group, public discussion, submission of plan to various institutions). Every management plan must be supplemented with Regulations "On Individual Protection and Use" of the particular protected area. These regulations are approved by the Cabinet of Ministers and are legally binding. Though all plans were elaborated in year 2003 (and plan for Piejūra Nature Park in year 2002), their final approval was delayed because of consulting and questioning the municipalities. In several municipalities, physical plans are being elaborated and we took the opportunity to integrate the produced management plans within the overall physical plans. Thus promotion of



the incorporation of nature conservation interests in the legally binding municipalities documents has been promoted.

**All management plans were elaborated successfully.** In Table 1, the progress of elaboration of all management plans is shown. Summaries of each plan are given under description of Actions A7-A9.

Table 1. Progress of elaboration of management plans.

	<b>Piejūra Nature Park</b>	<b>Užava Nature Reserve</b>	<b>Bernāti Nature Park</b>	<b>Vidzemes Akmeņainā Jūrmala Nature Reserve</b>
Action	A7	A8	A8	A9
Area	8808 ha	3225 ha	2945 ha	3849 ha
Municipalities	3 (Rīga, Saulkrasti, Carnikava)	1 (Užava)	1 (Nīca)	2 (Salacgrīva, Liepupe)
Meetings of the steering group	16.05.2002 20.08.2002 06.07.2004.	26. 08. 2003. 24. 09. 2003. 03. 12. 2003. 23. 03. 2004.	24.11.2003. 20.02.2004.	27.17.2003. 29.09.2003. 29.10.2003. 19.06.2004.
Other meetings	30.11.2003. 25.06.2003. 17.09.2003. 25.06.2003. 22.04.2004. (meetings with various departments of Rīga City Council)	meeting with landowners 15.10.2003.	meetings with landowners 15.02.2003. 16.06.2003.	meeting with landowners 29.08. 2003; 17.10.2003.
Public discussion	25 <sup>th</sup> – 27 <sup>th</sup> November, 2002.		31.10.2003. 24.11.2003. 27.10.2004.	29.11.2003.
Final version delivered to municipalities	15.04.2004.	14.05.2004.	08.04.2004.	19.03.2004.
Plan approved by the Minister of Environment	01.11.2004.	01.11.2004.	In process of approval	20.08.2004.
Regulations “On Individual Protection and Use” approved by the Cabinet of Ministers	Nr.204/14.03.2006	In process of approval	Nr. 273/ 08.04.2004	In process of approval
Related actions	A10, C2, C3, D1, D2, E1, E8, E10, E19, C5.	E8, E1, E8, E18.	A10.	A10, C6, D3, E1, E8.

### **Action A7. Development of management plan for protected nature area Piejūra Nature Park.**

**Time plan:** April 2002 – December 2003.

**Results.** Plan was prepared during 2002 – 2003, approved by the Minister of Environment on 01.11.2004. Management measures foreseen by the plan are already partly implemented by our project (related actions C2, C3, D1, D2, E1, E10, E19).

**Management measures** in the Piejūra Nature Park are focussed on reaching six short-term objectives:

1. Establishment of the management system of the Piejūra Nature Park.
2. Provision of the necessary management for adequate protection and maintenance of habitats and species.
3. Establishment of the infrastructure for recreation and tourism (paths, parking sites etc.).
4. Management of the land property issues. Classification of land property information is necessary because there are many private properties. The owners are interested in compensations; agreements with landowners must be reached; resources should be found for the buying-out or for compensations.
5. Information and education of the general public about the nature values of the Piejūra Nature Park.
6. Research and monitoring.

The main responsible institutions for the implementation of measures are Rīga, Saulkrasti and Carnikava Municipalities, Lielrīga Regional Environmental Board, Nature Protection Board.

**Additional results.** In cooperation with the project team, the Ministry of Environment prepared Regulations “On Individual Protection and Use” for Piejūra Nature Park which were approved by the Cabinet of Ministers (Table 1).

**Additional information.** Management plan was attached to Interim report. It is published on project website <http://piekraste.daba.lv/>.

#### **Action A8. Development of management plans for the protected nature areas Bernāti Nature Park and Užava Nature Reserve.**

**Time plan:** April 2003 – December 2005.

**Planned:** Elaboration of 2 management plans.

**Results.** Both plans are elaborated.

**1. Bernāti Nature Park** is located at the SW coast of Latvia and its habitats of Community importance are various types of natural forests, mainly wooded dunes and boreal forests as well humid dune slacks. Main threat is the increasing recreation pressure.

Main actions of the management plan are: establishment of micro-reserves within the protected habitats; establishment of resting sites, paths and educational paths; establishment of parking place; information signs and information boards; preparation and dissemination of information.

Territory is divided into 3 functional zones. Zone of nature reserve is established for the protection of protected habitats. Zone of nature park is established for the protection of all natural habitats, landscape and cultural environment as well for recreation and education. Neutral zone is for the development of tourism infrastructure.

**Complications.** The approval of the management plan for Bernāti Nature Park was hindered because of the conflict between the restrictions for nature protection purposes and economical interests expressed by Nīca municipality (explained in interim report and third progress report).

**Additional activities.** Urgent establishment and approval of micro-reserves (to ensure the protection of priority protected forest habitats) was attained by the project in year 2004 (Action A10).

**Additional results.** On April 2004, regulations “On Individual Protection and Use” have been authorised by the Cabinet of Ministers (Table 1). These regulations are the final document, which ensure the nature protection regime designed by the nature management plan. As long the Individual Regulations are approved but plan is not approved, the nature protection regime is even stricter as it would be after the approval of management plan. For every new building, the Environmental Impact Assessment or Impact Assessment on Natura 2000 is required.

**2. Užava Nature Reserve** is located in W coast of Latvia. It’s main values – old natural forests on dunes and very wide and diverse grey dunes. The Minister of Environment approved the management plan of **Užava NR** on November, 1st 2004.

The main management measures of **Užava NR** management plan are dealing with the diminishing of antropogenic pressure. Planned constructions are paths, car parking sites (3 small (“pockets”) and 4 large), two resting sites (with sites for camping), traffic signs, barriers on illegal roads. Fences will prevent the driving in dunes; apertures in fences will lead people to the paths and to the sea. Other management measures are control, waste management, monitoring. Measures for rising of public awareness are: information signs and information boards, booklet. An information page was prepared for the local residents during the preparation of management plan.

**Additional results.** In cooperation with project team, the Ministry of Environment has been prepared Regulations “On Individual Protection and Use” (submitted to the Cabinet of Ministers for approval).

**Additional information.** Both management plans were attached to Interim report. They are published on project website <http://piekraste.daba.lv/>.

### **Action A.9. Development of management plan for Vidzemes Akmeņainā Jūrmala Nature Reserve.**

**Time plan:** April, 2003 – December, 2003.

**Planned:** Elaboration of management plan.

**Progress.** The Plan has been approved by the Minister of Environment on August 20th, 2004.

Vidzemes Akmeņainā Jūrmala Nature Reserve is a part of North Vidzeme Biosphere Reserve. The management plan is prepared for the time period to 2014.

Main objectives for this management period: management of habitats, management of species, research, public education as well as public access and recreation.

Main management measures:

- Development of infrastructure for recreation (paths, ladders, barriers, educational paths, waste collection etc.);
- Management of habitats (strengthening of dunes, mowing and grazing of grasslands, restriction of invasive species, etc.);
- Preparation and dissemination of information (information boards, signs, website, publications etc.) and
- Further investigations (invertebrates, antropogenic pressure, and erosion processes).

Plan of Vidzemes Akmeņainā Jūrmala NR has been already partly implemented by our project (related action E16).

**Additional results.** In cooperation with project team, the Ministry of Environment has been prepared Regulations “On Individual Protection and Use” (submitted to the Cabinet of Ministers for approval).

**Additional information.** Management plan was attached to Interim report and is published on project website.

**Action A.10. Establishment of micro-reserves for habitats and species of Community importance.**

**Time plan:** July, 2003 – December, 2005.

**Planned.** Establishment of a network of micro-reserves in the whole project area.

**Description.** By establishment of micro-reserve, it is possible to protect habitats and species of Community importance outside Natura-2000 sites or to protect habitats everywhere where their survival is threatened.

Micro-reserve is a small protected nature area for particular habitats and species. According to the “Regulations on the Establishment, protection and Management of Micro-reserves” (2001), area of micro-reserve for habitats can be 0.1 - 20 ha (for natural forests and for bird species, it can be larger).

Procedure of micro-reserve establishment includes: submission of documents (application form with expert conclusion and site description); map of micro-reserve (scale 1:10 000); inquest about land properties, issued by State Land Service or State Forest Register); evaluation of the proposal by Nature Protection Board, Regional Environmental Board, municipalities. The Ministry of Environment or the Regional Forestry Board (in case a proposed micro-reserve is located in a forest area) gives the final decision on the establishment of micro-reserve.

**Results.** The network of microreserves in the coastal zone is established. In total, 198 proposals of micro-reserves were submitted to the responsible institutions. 65 out of them are approved, others are in a process of approval (Table 2).

Microreserves are established in forests, grasslands, open dunes, and other habitats (Table 2), The results of habitat mapping (action A2), the inventory of seminatural grasslands, and inventory of natural forests had been used for the proposition of the micro-reserves.

Large work of experts is needed for the establishment of microreserves. Micro-reserves can be established in **forests**, which qualify for the “natural forests” evaluated by certified forest experts. Thus, boreal forests (9010\*) and other protected forest habitats are identified. In the state owned forests, the natural forests were inventoried already before our project. In all private forests, evaluation of old-growth natural forests was managed by experts of our project. Micro-reserves were established in almost all valuable natural forests.

In **grasslands**, microreserves were established on a basis of the project “Inventory of seminatural grasslands”, carried out by Latvian Fund for Nature in 2000 – 2002. Updated evaluation of proposed habitats and specification of borders was necessary to be done by the LIFE project.

**Priority sites for the establishment of microreserves were:** Natura 2000 sites, potential Natura 2000 sites, priority protected habitats of Community importance.

Table 2. Establishment of micro-reserves

Site	Habitat	Information on the proposed micro-reserves			Progress of approval
		Number	Total area	Time of application	
Bernāti Nature park	boreal forests (9010*); wooded dunes (2180)	6	111 ha	September 2004	5 approved in October 2004
Slītere National park	boreal forests (9010*); wooded dunes (2180)	32	274.6 ha	December 2004	Submitted for approval
“Vidzemes Akmeņainā Jūrmala” Nature Reserve	boreal forests (9010*); alluvial forests (91E0*) grassland with <i>Jovibarba sobulifera</i> (protected plant species in Latvia)	24	85.1 ha	January 2005	13 microreserves approved in March and April 2005
Carnikava municipality	coastal meadows (1630*)	3	54.1 ha	October 2004	Submitted for approval
Pāvilosta municipality	grey dunes (2130*)	4	57.1 ha	October 2004	Submitted for approval
Piejūra Nature park	boreal forests (9010*); alluvial forests (91E0*)	47	378.2 ha	April 2005	All approved in May 2005
Grasslands in Ventspils and Talsi District	species-rich <i>Nardus stricta</i> grasslands (6270*)	10	26.6 ha	April 2005	Submitted for approval

**Additional information.** Copy of the micro-reserve application, copy of order on approval (examples) and detailed information on microreserves in Bernāti Nature Reserve were attached to the Interim report.

## C. NON-RECURRING HABITAT MANAGEMENT

### **Action C1. Restoration of grey dunes by cutting trees and shrubs in the coastal protection belt between Ziemepe and Pāvilosta.**

**Time plan:** July, 2003 – December, 2005.

**Planned:** cutting of trees and shrubs in 20 ha area, SW coast of Latvia. Habitat – overgrowing grey dunes and the transition to wooded dunes.

**Complications.** As it was explained in previous reports, there were problems for the implementation of this action, mainly due to the sensitive attitude of the society to the clear-cutting in the coastal protection belt. The situation was being continuously communicated with the authorities of the Ministry of Environment, Joint Stock Company “Latvian State Forests” and local Vērgale Forestry Board.

Because of the long procedure of bureaucracy it was decided partly change the content of this action and cut only the invasive shrubs and not the trees. Such decision was supported also by the letter of the Commission (ENV.D.1/RS/nb D(2004) 513813).

**Results.** Grey dunes of the planned area (20 ha) were restored successfully.

In summer 2006, grey dunes in area of 20 hectares were restored in Ziemeupe Nature Reserve, by cutting of invasive shrub species *Rosa rugosa*. It was done in cooperation with Vērgale Forestry. Sites for the restoration were chosen according to the habitat maps (Action A2).

**Continuation.** It is planned to continue the restoration of grey dunes, in cooperation with the managing authorities of the site: Liepāja Forestry Board and Joint Stock Company “Latvia State Forests” South Kurzeme Board. At the same time it should be underlined that necessary amendments to the legislation on proper habitat management, including cutting of trees in protected nature areas, are being prepared by the Ministry of Environment.

### **Action C2. Restoration of Boreal Baltic coastal meadows in Vakarbuļi and Daugavgrīva Nature Reserves in Rīga city.**

**Time plan:** July 2003 – December 2005.

**Related actions:** C3 (shelter and fencing), D1 (grazing and mowing), E10 (paths etc.).

**Planned:** Restoration of 80 ha of meadows by cutting of shrubs (25 ha), removing of illegal sheds and their remains, collecting waste.

**Results.** Coastal meadows in area of 80 hectares have been restored.

**1. Cutting of shrubs.** Shrubs were cut in area of **25 hectares** (6.5 ha in year 2004, 18.5 ha in 2005). 1.5 ha of this area, were occupied by alien invasive shrub species, which were also cut (*Rosa rugosa*, *Amelanchier spicata*).

**2. Waste collection.** In April and May 2006, collection of waste was organised in grasslands at the bird observation tower, shelter and fencing. Local residents were employed to next to the tower and their job was difficult because of deep ditches.

On 30.06.2006 (European Green day), staff of State Environmental Agency collected waste voluntary. The project team also took part in waste collection. In total, **55 hectares** were cleaned out and 32m<sup>3</sup> of waste collected. The municipality ensured the containers and waste transportation.

**Complications/variations.** The implementation of removal of illegal buildings is still delayed because it depends on the cooperation and decisions of various institutions. (The problem was reported also in previous reports.)

Since March, 2004, the communication about the destruction of illegal buildings is being continued. To attain the decision of the municipality, we have sent letters to several state and municipal institutions – Executive Director of Rīga City, Rīga City Major, Rīga City Environmental Department, Rīga City Department of Estate, State Environmental Inspection, Lielrīga Regional Environmental Board.

Before resolving the decision on the removal of illegal buildings, Rīga City Council has warned the owners of the buildings twice. On September 13th, 2005, the decision “On the removal of illegal buildings in Daugavgrīva Nature Reserve” was taken. One of the owners removed his buildings. Other three owners appealed against this decision to the Administrative Court. The case is still in the court.

To implement this action (to compensate the area unmanaged), waste was collected in larger area than planned. So, the aim of the action has been reached. At the same time, due to the legal conditions the removal of illegal buildings is still in a process and will be finished after the project end.

**Action C3. Management measures for Boreal Baltic coastal meadows and white dunes in the Vakarbuļi and Daugavgrīva Nature Reserves in Rīga.**

**Time plan:** July, 2003 – December 2005.

**Planned:** 2 cow shelters, fencing (~1 km).

**Related actions:** A6, C2, D1, E10.

**Results.** One **fencing** area (length of 1100 m, area 5.5 hectares, including one smaller fencing, length of 100 m) and a **shelter** have been built in Daugavgrīva Nature Reserve (finished in November 2005).

**Variations.** It was not possible to build 2 fencing areas and shelters with the available finances (reasons explained in third progress report). A copy of all technical designs has been delivered to the municipality institutions and they are interested in continuation of the complete implementation of this technical design.

**Continuation.** The shelter has been registered at the Agriculture Data Centre. Further, a shelter and fencing will be maintained by Environmental Department of Rīga City Council.

**Action C4. Restoration of grey dunes and white dunes by destruction of expansive plants.**

**Time plan:** April, 2003 – March, 2006.

**Planned:** restoration of ~100 ha by extraction of *Rosa rugosa* and other expansive alien plants, in Western coast of Latvia.

**Results.** Grey dunes of area of 100 hectares have been restored.

Cutting was organised in summer 2005, in area of 42 hectares in Pape Nature Park and in area of 58 hectares in Ziemeļu Nature Reserve.

Before the cutting of invasive species, all the landowners of the sites where management was necessary were informed by mail. The necessity of the control of invasive species was discussed also in the local newspaper and in personal consultations with project partners.

**Additional result.** This action indeed has raised the public awareness concerning invasive species. Now, most of the local residents of coastal villages know what is *Rosa rugosa* and that this alien species should be restricted.

**Action C5. Restoration and management of wooded dunes and white dunes in Saulkrasti.**

**Time plan:** October 2003 – June 2005.

**Planned:** Strengthening of dune bank, ~2000 m<sup>2</sup>, with a fence of woven branches, in site where erosion was accelerated due to trampling.

**Related action:** E14.

**Results.** Dunes have been restored as it was planned. The fence of woven branches was constructed in 2004, length of 2000 metres. Since, erosion has been hindered significantly. Constructions were not damaged by the storm of January 2005.

Dunes were strengthened only in sites with high visitor pressure.

This site was visited by Commission Review Mission in June 2004.

**Action C6. Restoration and management of Boreal Baltic coastal meadows, embryonic dunes in Ainaži and Salacgrīva.**

**Time plan:** July 2003 – December 2005.

**Related actions:** D1, E16.

**Planned:** Cutting of shrubs (10 ha), cleaning of ditches (2.3 km), planting *Salix sp.*

**Variations.** Based on the consultations with coastal geomorphologist (prof. G.Eberhards) the most necessary and cost efficient solutions for the restoration and maintenance of habitats of Community importance in this area were identified (details were explained in third progress report):

1. Restoration of embryonic and white dunes in area of 9 hectares.
2. Cleaning of the outlet of River Blusupe (cleaning of reeds and shrubs).
3. Strengthening of dune bank (vowed and decked branches, planted *Salix*).

**Results.**

1. Dunes were restored in area of 6 hectares in Salacgrīva and 3 hectares in Ainaži. The area was mown, ploughed, harrowed and roots of reeds were removed. The same action was repeated in years 2004 and 2005 and managed by various performers – 2 farms and 8 individuals. Pupils of Salacgrīva school participated voluntarily as well.

2. River banks of 750 metres were cleaned in summer 2005.

3. Dunes were strengthened at the endings of boardwalks: vowed branches 1300 m, planted *Salix* branches 650 metres, decked branches 200 m<sup>2</sup>. The dune strengthening was finished on 10th December 2005. Dunes were strengthened only in sites with high visitor pressure.

Restored dunes and cleaned river banks were surveyed by the geomorphologist and were evaluated as very successful realised.

**Action C7. Restoration and management of wooded dunes and white dunes in Roja**  
cancelled according to First Additional Clause of 8 December, 2005.

**Action C8. Restoration and management of wooded dunes and western taiga in Jūrmala.**

**Time plan:** July 2003 – December 2005.

**Related action:** E21.

**Planned:** strengthening of dunes; removal of alien species.

**Results.** Dunes were strengthened in accordance to the management plan of Ragakāpa Nature Park. In total, 180 m<sup>2</sup> were strengthened in autumn 2004. The strengthening reduced the ongoing erosion significantly and has not been damaged.

Dunes were strengthened only in sites with high visitor pressure, at the planned boardwalks (action E21).

Alien species (shrubs *Rosa ssp.*, *Amelanchier spicata*, *Eleagnus commutata*, *Cotoneaster lucidus*) were cut in area of 12 hectares in 2004, 15 hectares in year 2005.



## D. RECURRING HABITAT MANAGEMENT

### **Action DL. Maintaining of Boreal Baltic coastal meadows by mowing and grazing.**

**Time plan:** July 2003 – June 2006

**Planned:** Management of **80 ha in Rīga** (45 ha grazing, 35 ha mowing); management of **35 ha in Ainaži and Salacgrīva** (20 ha by grazing, 15 ha by mowing).

**Results.** In both sites, all planned area was successfully managed.

#### **1. RESULTS IN RĪGA** (related actions C2, C3, E10).

In Rīga, grasslands are managed in the Daugavgrīva and Vakarbuļļi Nature Reserves. Both areas are included in Piejūra Nature Park. **In total, 87 hectares of grasslands were managed by mowing of grass and reeds and by grazing.**

**Mowing** was organised in years 2003-2005. Unmown belts for the conservation of invertebrates were left (according to the recommendations of entomologists); the locality of these belts was changed every year.

**Burning.** In spring 2005, according to the management plan of Piejūra Nature Park and the recommendations of experts, the burning of reeds in unmown belts was organised. Local fire brigade participated during burning.

Reeds can be burned only in late autumn or early spring when the soil is frozen (to save invertebrates in the soil) and birds do not nest in shrubs and on the ground. In Piejūra Nature Park, the burning was allowed only until the 1st April (according to the management plan of Piejūra Nature Park).

The burning was unsuccessful because of unsuitable weather conditions. The winter 2004/2005 was very snow-rich. The snow did not melt until the 1st April which was the deadline for burning. Below the snow the water was left from the flood of January, 2005 and reed was too wet. It was only possible to burn reeds, which were mown and collected in piles, but the flames did not shift ahead.

**Grazing.** Fencing and shelters for cattle were built in autumn 2005. Cattle were purchased in December 2005.

In June 2006, three cattle (cow, calve and bull) were let in grazing area. In this site, cattle are being looked after by the local resident who has also his own cattle. According to the contract of cooperation signed, the owner of the cattle now is Rīga Zoological Garden which has facilities for cattle keeping in winter, if necessary.

**Variations.** Smaller area as it was planned in project area is managed by grazing (5.5 ha instead of 45 ha) because:

- large part of the area is too wet for building of fences;
- because of the high costs of building.

However, this area was compensated by mowing and proper management of the site is being ensured.

**Continuation in Rīga.** 1. In August 2006, **mowing** was organised by Nature Protection Board in cooperation with Environmental Board of Rīga City Council which received the finances from Rīga Fund for Environmental Protection. This cooperation will continue.

2. **Grazing** is being organised by Rīga Zoological Garden (subordinated to Rīga City Council). According to the contract signed between the Rīga Zoological Garden, Rīga City Council and University of Latvia, the Zoological Garden owns the cattle and organises grazing in this area. Zoological Garden will also organise applying for agri-environmental scheme subsidies; it will also continue to sign contracts with local person which looks after the cattle.

For the further grazing management, 3-sided contract was signed between the University of Latvia, Rīga City Council and Rīga Zoo.

## 2. RESULTS IN SALACGRĪVA (related actions C6, E16).

### **In Salacgrīva, 37.5 hectares of grasslands were managed in Nature Reserve “Randu pļavas”.**

**Mowing.** In years 2003, 2004, 2005, 14 hectares of grasslands were mown, each year in the same location. Additionally, 2.5 ha were mown by hand (in sites, which were too wet for the tractor).

**Grazing.** Since autumn 2003, 21 hectares are being managed by grazing. In year 2003, 5 cattle (1 adult cow and 4 calves) were purchased. In years 2004 and 2005, they had offspring, and now there are 12 animals – 6 adult and 5 calves at the place. All animals are in good health (it was also concluded by the veterinary control). Cattle are being looked after by the farm Z/S “Ķiķupvēveri 1” (personally S.Dunda).

After the storm of January 2005, part of the fencing and the shelter were destroyed. It was decided to restore fencing in the same size but to change its location. Fencing was moved 30 metres more inland. (The same habitats as earlier are being managed.) Shelter was re-established in larger area (41 m<sup>2</sup>) because of the offspring.

### **Continuation in Salacgrīva.**

1. **Mowing** will be continued by the farm Z/S “Ķiķupvēveri 1” because the grass is necessary for the winter food of cattle.

2. For the continuation of **grazing**, the contract between the farm Z/S “Ķiķupvēveri 1” and Salacgrīva municipality was signed. It says that cattle bought by the LIFE project and owned by Salacgrīva municipality are temporarily loaned by farm Z/S “Ķiķupvēveri 1”. Newly born cattle belong to farm Z/S “Ķiķupvēveri 1”.

Three types of agri-environmental subsidies were applied and received for year 2006: state payments for the managed area; payments for the maintenance of seminatural grassland; payments for breeding cattle. (Payments by LIFE project for grassland management in Salacgrīva were not continued in 2006.)

**Variations.** During the project time, there was an in-determination on the management of cattle. Before the project time, landowners expressed their strong willingness to participate in this project. The problem is, that the land is divided in rather small land properties (~3 hectares) and there were no positive neighbours which could join their lands for the management. Farm Z/S “Ķiķupvēveri 1” remained the only possibility for the grazing management because it borders with the municipal land that was also included in a managed area.

The number of cattle was sufficient for the management of this area. (Also the monitoring results show that the grazing intensity is optimal.) Larger number of cattle would cause the overgrazing.

**Additional information.** Contracts concerning the further grazing management in Annex 2.

### **Action D2. Ensuring adequate control and protection in coastal zone of Piejūra Nature Park.**

**Time plan:** April, 2003 – June, 2006.

**Planned:** coastal supervisors controlling illegal actions in Piejūra Nature Park, Rīga.

**Results.** Action was successful, illegal actions decreased, public awareness and the qualification of inspectors raised.

In summer **2003**, two municipal policemen controlled (individually) illegal actions in Buļļu Island and in Mangaļsala.

In summer **2004**, the contract of cooperation with Rīga Municipal Police was signed; working hours and season was prolonged. This cooperation was very successful – many illegal activities were stopped, staff was educated and awareness of local people was raised. Local residents were more often calling and informing on illegal activities.

Typical illegal activities eliminated by the police were: driving and parking in dunes, making fire, damage of information boards and signs, letting loose dogs. There is a trend that people respect the regulations if the control is regular and visible. After the season, policemen submitted the recommendations for the improvement of nature protection work. Recommendations specified the content and locality of information boards and information signs.

In year **2005**, we had planned to continue this cooperation. Unfortunately, the police refused to participate in our project because of the crisis of the municipal police force of Rīga City Council. (Due to low salaries, many policemen quitted the work. At the same time, the responsibilities of the remained staff were enlarged.) Therefore, contracts with 4 persons from Rīga Forestry Agency (2 forest surveyors and 2 inspectors) were signed. Controllers did appr. 20 roadsteads per month each. Typical illegal activities were driving in dunes, making fires. Foresters did much of preventive work – they searched out the illegal roads and closed them with stakes and ditches (20 roads were closed). They also organised the collection of waste.

The **constraint** of this action is the necessary legal status of the supervisor. Only officers (policemen, inspectors) have rights to penalise. Other hired persons do not have these rights. Officers are full-time engaged in their direct tasks. In year 2006, Nature Protection Agency applied and received the finances for further management of Piejūra Nature Park, including the supervising. Faced with the mentioned problems, the supervision was cancelled.

**Continuation.** This was a demonstration activity. During various events, we have stressed the necessity of this very effective measure for the protection of habitats of Community importance.

The result of this action is also the raised capacity of municipal policemen and inspectors which are local residents here and which continue the control (on the basis on their police job) of this area but taking the nature protection in account.

### **Action D3. Ensuring adequate control and protection in coastal zone of North Vidzeme Biosphere Reserve.**

**Time plan:** October, 2002 - June, 2006

**Progress.** The control has been constantly performed during a whole year, **since January 2003**. Control was performed by inspector of North Vidzeme Biosphere Reserve. During the

summers, due to many illegal activities he was assisted also by Salacgrīva Police and inspectors of Valmiera Regional Environmental Board.

Typical illegal activities eliminated by the inspector were driving in dunes (mainly), making fire, camping, carrying-away stones. (This is a particular problem for North Vidzeme coast – people take away stones for building, and it escalates the erosion of the coast.)

Often, people were calling and informing the inspector, even during the night. This action was appreciated by various institutions – Ainaži, Salacgrīva and Liepupe municipalities, Joint Stock Company “Latvia’s State Forests”.

Action was continued until the end of project time.

**Continuation.** After the end of project time, the control is being continued by the staff of North Vidzeme Biosphere Reserve, but in lesser extent. At the same time it has been noticed that after the installation of information boards and signs (actions E1, E8.) and barriers (E16.) the protection of coastal habitats has improved.

#### **Action D4. Purchase of cattle for grazing management in meadows.**

**Time plan:** April, 2003 – September, 2005.

**Planned:** purchase of 25 beef cattle. Related actions: A6, C2, C3, C6, D1.

**Results.** In November 2003, five cattle were bought for the management of grasslands in Salacgrīva - one adult, female (the *Latvian Brown*, local breed), four calves (hybrids between *Sharole* and *Highlander*, 3 females and 1 male). Since that time, cattle had offspring and their number has increased to 12.

In **Rīga**, 2 cattle (including 1 cow with calf) were bought in December 2005 - the bull of *Galloway* breed and the cow (with calf) of the *Highlander* breed. These types of cattle were chosen because they are very calm (the area is close to living area and children will want to get in contact with animals).

Other animals were not purchased because it is optimum amount for this area considering the offspring and the low quality of grass here.

#### **Delays and variations.**

In Salacgrīva, more cattle were not purchased because of the difficulties to find landowners who want to participate in this project and which land is large enough, (explained also in action D1), and also because the purchased number of cattle was sufficient for the managed area.

In Rīga, the purchase of cattle was delayed because of delayed actions A6 (technical designs) and C3 (building of fencing and shelters), the rising of prices and the decreased area of fencings. Decrease of the grazed area was compensated with mowing.

The number of cattle was sufficient for the management of area of Action D1. (Also the monitoring results show that the grazing intensity is optimal.) Larger number of cattle would cause the overgrazing.

## E. PUBLIC AWARENESS AND DISSEMINATION OF RESULTS

### **Action E1. Establishment and installation of information boards.**

**Time plan.** July, 2003 – March, 2006.

**Planned:** 200 information boards in locations where conservation and restoration actions are implemented as well in areas with heavy visitor pressure.

**Results.** All 200 information boards have been established.

Of them 64 were installed together with the small-scale infrastructure for visitors (actions E10-E21) and approved within the technical designs for the sites (Action A6). Information on the information boards includes: the map, short description of the site, habitats, species, particularly concerning habitats and species of Community importance, English summary (in some sites, also Russian summary), LIFE and Natura 2000 logos. In Jūrmala, there are 2 general boards (information on Ragakāpa Nature Park) and 5 thematical ones- plants, insects, pine forest, landscapes (2). In Rīga, there are also 7 “small thematic” boards on the species and habitats of Community importance installed.

Other 136 information boards are smaller, and they contain the information on single habitats of Community importance – description and necessity for their protection. LIFE and Natura 2000 logos are included. These boards were installed within Natura 2000 sites and in priority habitats of Community importance where there is a necessity to inform visitors. Boards have been installed in the following habitats: foredunes, grey dunes, wooded dunes, annual vegetation on drift lines, perennial vegetation of stony banks, reefs. These information boards were installed in following sites: Natura 2000 sites National Parks “Ķemeri” and “Slītere, Nature Reserves “Užava”, “Ziemeupe”, Nature Park “Pape”, in North Vidzeme Biosphere Reserve as well in coast of Pāvilosta.

**Additional information:** pictures of information boards in CD, Annex 3.

### **Action E2. Preparation and publishing of leaflets.**

**Time plan:** July, 2002 – June, 2006.

**Planned:** 20 coloured leaflets, 200 000 copies in total.

**Results.** 20 coloured leaflets (200 000 copies in total) were issued.

Table 3. Leaflets.

	Name	Copies	Time of issue	Description
1	Project “Protection and management in coastal habitats in Latvia” in Latvian	15 000	2003	Aim, actuality, area, actions of the project; pictures of key habitats and structures
2	“-“ in English	2 000	2005	Aim, actuality, area, actions of the project; pictures of key habitats and structures
3	North Vidzeme Biosphere Reserve (in Latvian)	10 000	2005	Habitats and species of Community importance, management

4	Bernāti Nature Park (in Latvian)	10 000	2005	Development, habitats and species of Community importance
5	Coastal Natura 2000 sites (in Latvian)	5 000	2005	What is Natura 2000 – European context, values, residence, management, tourism; map of coastal Natura 2000 sites.
6	Mushrooms in coastal habitats (in Latvian)	5 000	2005	Open dunes – habitat of Community importance and home for endangered mushroom species
7	Ziemupe Seacoast (in Latvian)	3 000	2005	Development, habitats and species of Community importance in Ziemupe Nature Reserve
8	Ziemupe (in English)	4 000	2005	Development, habitats and species of Community importance in Ziemupe Nature Reserve
9	Insects in dune habitats (in Latvian)	10 000	2005	Typical and rare insects in coastal habitats of Community importance
10	Ragakāpa Nature Park (in Latvian)	10 000	2005	Development, habitats and species.
11	Grey dunes in Pāvilosta (in Latvian)	5 000	2006	Grey dunes – priority protected habitat in Pāvilosta. Typical and rare species
12	Užava Nature Reserve (in Latvian)	5 000	2006	Development and value of Užava coastal habitats. Typical and rare species
13	Habitats of the coastal Natura 2000 sites (in Latvian and English)	20 000	2006	Coastal habitats of Community importance, and their abundance in coastal Natura 2000 sites
14	Coastal birds (in Latvian)	16 000	2006	Typical and rare birds in coastal habitats of Community importance.
15	North Kurzeme Coast (in Latvian)	20 000	2006	Coastal habitats of Community importance in North Kurzeme
16	North Kurzeme Coast (in English)	10 000	2006	Coastal habitats of Community importance in North Kurzeme
17	Coastal invasive species (in Latvian)	10 000	2006	Invasive species – how to recognise them and which coastal habitats of Community importance are threatened
18	Mapping of coastal habitats (in Latvian)	10 000	2006	Habitat mapping – process, results
19	The opinion of coastal landowners (in Latvian)	10 000	2006	Questionnaire – main results
20	Nature protection – passive and active (in Latvian)	20 000	2006	Methods of management of coastal habitats

There is a strong demand to our published materials in institutions, municipalities, educational institutions, NGO's and other.

**Leaflets** and also **booklets** (action E8) were distributed to partners; to all coastal municipalities; to tourism information centres (local leaflets only); to various state institutions;

to students of University (Faculties of Biology, Geography, Laws; publishing house of the University); to the central distributor for libraries; to schools (especially the booklet “Plants on the seaside); to the Ministry of Municipal Affairs and Regional Development and to other state institutions. Materials were distributed in seminars and in meetings with local people and stakeholders. Also the institutions of the Ministry of Environment (Department of Nature Protection; Nature Protection Board, State Environmental Agency) and NGO’s (Environmental Protection Club, Alliance of Municipalities and others) willingly distributed booklets and leaflets in their seminars and meetings.

The first leaflet was sent to every coastal landowner (together with questionnaire, action A1).

Now we often find our booklet and leaflet information cited in newspapers and websites.

**Additional information:** All leaflets Annex 4. Information on the distribution of leaflets and booklets (response to letter DG ENV/D1/SL/nb D(2006) 600 of 30 March 2006) in Annex 6. Leaflets are published on project website as well.

### **Action E3. Preparation and publishing of booklets.**

**Time plan:** January, 2003 – June, 2006.

**Planned:** 7 booklets, 113 000 copies in total.

**Results.** 7 booklets (113 000 copies in total) were issued.

Table 4. Booklets.

	Name	Publishing information	Description
1.	Sustainable development of the coast.	3 000 copies, A5, 18 pages, coloured, in Latvian, written by Dr. geogr. A.Melluma, 2004.	Recommendations for the sustainable physical planning in coastal municipalities.
2.	The sea is attacking, what to do?	10 000 copies, B5, 24 pages, coloured, in Latvian? Written by Dr.geogr. G.Eberhards, 2004.	About the erosion. It shows the level of erosion in various sites, influencing factors and what to do to facilitate the abatement coastal erosion etc. The necessity to respect natural processes at the coast is strengthened
3.	Restrictions in the use of land property rights within the coastal protection belt	5 000 copies, B5, 32 pages, black-and-white, in Latvian, written by Dr. iur. I.Čepāne and S.Meiere, 2004.	The booklet deals with the legal issues concerning coastal protection belt of the Baltic Sea and the Gulf of Rīga.
4.	Plants on the Seashore	20 000 copies, B5, 65 pages, coloured, in Latvian, written by B.Laime, 2005.	Booklet for schools. Common and rare plant species on Latvian coastal landscape – pictures, description, protection, habitats of Community importance.
5.	Piejūra Nature Park in Rīga Region	25 000 copies, B5, 24 pages, coloured, in Latvian, written by M.Nikmane and I.Plikša, 2006.	Description and evaluation of Piejūra Nature park in Rīga. Management priorities, protection of habitats and species of Community importance.
6.	South Kurzeme Coast	25 000 copies, B5, 16 pages, coloured, in Latvian, written by B.Laime, 2006.	Protection of coastal habitats and species of Community importance in Liepāja District.
7.	North Vidzeme Coast	25 000 copies, B5, 16 pages, coloured, in Latvian, written by L.Eņģele, 2006.	Protection of coastal habitats and species of Community importance in North Vidzeme.

**Additional information:** All booklets in Annex 5. Booklets 1 – 3 were attached also to second and third progress reports, and in Interim report. Information on the distribution of leaflets and booklets (response to letter DG ENV/D1/SL/nb D(2006) 600) in Annex 6. Booklets are published on project website.

#### **Action E4. Seminars for stakeholders.**

**Time plan:** January, 2003 – June, 2006.

**Planned:** 3 general (large) and 8 local seminars.

**Results.** 4 general and 8 local seminars were organised as well 5 field trips were organised.

Table 5. Seminars and other events organised by the project.

Event	Partici-pants	Description
<b>General seminars</b>		
Seminar for stakeholders about LIFE project. Rīga, 31.10.2002	130	Institutions, municipalities and related projects were informed about the problems of coastal habitat conservation as well about the LIFE project - it's aims and main actions.  Discussions showed that people both from state institutions and municipalities have various opinions on how the coastal habitats should be protected. Many of them did not know the key legal acts concerning the physical planning in coastal areas or had various viewpoints on their interpretation. Therefore the seminar "Aspects of the legal protection of the sea coast" was organised.
Elaboration of the Coastal Geographical Information System in Latvia. Rīga, 30.01.2003	40	The reason for this seminar was the constraints which we met while gathering maps and other information about the project area, for the preparation for the habitat mapping and functional zoning (Actions A.2, A.3). The information is stored in several institutions and nobody knows where to find it. Topics were: the contribution of our project to the elaboration of Coastal GIS in Latvia; aspects of exploitation of habitat maps; national environmental monitoring program concerning the coast. Minister of Regional Development and Municipal Affairs Ivars Gaters delivered lecture about the national spatial plan and it's association with the coast. In discussions, participants concluded that Geographical Information System for the coastal areas is necessary; it would be constructive to have one institution for that; the state system for this function is un-arranged.
Informative seminar "Aspects of the legal protection of the sea coast". Rīga, 7.02.2003	130	Main topics: general principles and methods of planning in coastal areas; the role of spatial planning within the market economy; the legal force of documents issued by municipalities; the appeal against the decisions issued by municipalities; examples of territorial planning at the coast. It was good chance that the Justice of Constitutional Court of the Republic of Latvia, Ilma Čepāne, delivered a lecture about constitutional human rights on property and the building restrictions in coastal protection belt. Her publication on the legal aspects of protection of the coast is published on project web-site at <a href="http://piekraste.daba.lv/LV/likumi/sarga_krastu.shtml">http://piekraste.daba.lv/LV/likumi/sarga_krastu.shtml</a> (in Latvian).
Final seminar for stakeholders about LIFE project. Rīga, 13.06.2006.	90	Representatives from various institutions and enterprises related to the project were informed on project outcomes and results.



<b>Local seminars</b>		
Management of Pape Nature Park. Rucava (Liepāja district), 15.02.2003	120	Seminars in collaboration with Liepāja Regional Environmental Board, local municipalities, World Wildlife Fund, Liepāja Forestry Board, Inspectorate for Cultural and Historical Heritage in Liepāja district were organised in villages Nīca and Rucava (locality of Actions A8 and E20). Aspects of biodiversity and protection in Pape Nature park and management of Pape and Bernāti Nature parks were analysed. In discussions, people were asking mainly how the protection of the coast will influence their life and their business.
Management of Pape Nature Park and Bernāti Nature Park. Nīca (Liepāja district), 14.03.2003	90	
Actual problems of the coast. Pāvilosta, 10.06.2003.	57	Introduction to management of coastal habitats and Bernāti Nature Park. Discussion about the compensations for landowners.
Management of the sea coast. Mērsrags, 16.06.2003.	55	Audience – local business people. Topics - erosion of the coast, management, best examples.
Values of nature in Vidzemes Akmeņainā Jūrmala Nature Reserve. Salacgrīva, 29.08.2003.	36	Introduction for the elaboration of management plan. Residents explained their wishes of the management in this area.
Role of natural grazing for the conservation of biodiversity. Salacgrīva, 18.10.2003.	~30	Residents of Ainaži and Salacgrīva introduced in habits of large grazing animals ( <i>Sharole</i> and <i>Highlander</i> ) and their use for the management of grasslands.
Practical experience and solutions for the management of protected nature areas and the coast. Rīga, 07.05.2004.	89	Exchange of very practical experience about construction of paths, ladders, information boards etc.
Competition for pupils, Quo vadis, the coast (Kurp ej, piekraste"). 15.05.2004. – 12.09.2004.	34	<p>In any form, pupils (age 10 – 14) were asked to send their vision about the future of the coast, showing the balance between nature protection and economic development. Hidden goal of this action was to encourage the discussions between children and their parents about this subject.</p> <p>Altogether, 34 pupils participated. Children described the nature in places where they live or spend holidays, described habitats, species, and their protection. Children questioned older people about the past. Most of the children wrote that everyone is personally responsible for the conservation of a clean and natural seacoast. Several works were devoted to grey dunes as a protected habitat (2130*), their species and protection.</p>
Closing event of the competition for pupils, Quo vadis, the coast (Kurp ej, piekraste"). 04.12.2004, Rīga	29 children, 9 teachers, 20 parents	<p>Children together with their parents and teachers learned more about the variety of habitats and species at the sea coast of Latvia, their changes and about Natura 2000 sites. In Museum of Zoology and Herbarium of the Faculty of Biology, they learned typical and rare species of coastal Habitats of Community importance. They practised themselves how to make maps in computer and watched a movie about the LIFE project.</p> <p>Every child received acknowledgement and gift– various materials about nature protection. Teachers received materials about Natura 2000, about protection of habitats and species of Community importance. Prizes were in following nominations: literary work, visual performance, recommendations for coastal management, practical field research, study about the relation between nature and history. The main prize received Artūrs Turjanica (Liepupe secondary school, class 7.a) who wrote an essay about the hiking from Salacgrīva to Lembuži.</p>

Discussion “The management of grasslands of Gauja Outlet in Carnikava”. Rīga, 17.02.2005.	15	Representatives from Latvian Environmental, Geological and Meteorological Agency, Lielrīga Regional Environmental Board, Nature Protection Board, Carnikava municipality, Latvian Fund for Nature and other experts were invited to discuss the necessity to protect grasslands in Carnikava.
<b>Other events organised by the project.</b>		
European Green days. Rīga - Vecdaugava-Lilaste - Rīga, 01.06.2003.	25	Field trip. Teachers of biology visited various coastal habitats of Community importance, learned key elements and species, discussed protection and management.
European Green days. Rīga – Ķemeri – Rīga 29.05.2004.	27	Field trip. Students of biology and other persons visited Natura 2000 site, learned key structures and species of habitats of Community importance.
Field trip to Ziemeņu Nature Reserve. Vērgale, Ziemeņu, 31.05.2004.	20	Landowners of Ziemeņu Nature Reserve learned habitats and species of Community importance. They expressed willingness and need to use these knowledge to inform tourists and other visitors of the area.
Field trip on the protection and management of coastal habitats. 17.09.2005. – 18.09.2005. Liepāja, Bernāti, Pape, Nida.	40	Field trip. Students and lecturers from the Faculty of Biology visited several coastal Natura-2000 sites, learned species and habitats of Community importance, key structures, discussed protection, management.
European Green days. Rīga – Bolderāja – Vakarbuļļi – Rīga, 26.05.2006.	30	Field trip. Students of biology and other persons visited Natura 2000 site, learned key structures and species of habitats of Community importance.
Field trip to LIFE project sites, Pāvilosta, Užava, Roja, Lapmežciems, Jūrmala, 17.06.2006 - 18.06.2006.	40	Representatives of various institutions and Faculty of Biology visited LIFE project sites, discussed management and learned key structures and species.

**Additional information.** Pictures of various events in CD disc in Annex 3. Pictures and descriptions of seminars are published in project website.

#### **Action E5. Two films about coastal habitats.**

**Time plan:** July 2003 – December 2005.

**Planned:** Two films (15 and 20 minutes).

**Results.** Two films were produced.

**The first film, “The green city”** (“Zaļā pilsēta”) in English and Latvian was finished in year 2004. Its length is 30 minutes (instead of 15 planned; another 15 minutes were sponsored by the Studio). The film tells about Vakarbuļļi and Daugavgrīva Nature Reserves – habitats, species, people and development. In 2006, film was translated also in Russian.

The most significant events where film was demonstrated were: in Rīga City council (~20 spectators), in The Hall of University of Latvia (~90 spectators), the meeting of Rīga deputies and residents of Bolderāja (150), Rīga teachers workshop (26), session of Botanical Society; seminar for teachers of biology (110), gathering of parents at 19th Bolderājas secondary school (53), various events devoted to the "World water day" and other events concerning coastal protection.

Twice it was demonstrated **in national television** of Latvia. It was demonstrated also in Economic, Agricultural, Environmental and Regional Policy Committee of the **Parliament of Latvia**.

Copies of the film were distributed to deputies (politicians) of Rīga, schools, environmental NGO'S and other institutions. Presentation of the film will be continued as there is still the interest from schools, local residents etc. We have got a very positive feed - back from the audience. The film also helped for the consolidation of the local residents in favour of the nature protection of their area.

In year 2006, the film was translated also in Russian (the finances were received from Rīga Environmental Protection Fund). Now, 3-language DVD (300 copies) **is being distributed to schools of Rīga**.

**The second film** (20 min.) tells on the diversity of coastal habitats and species of Community importance of the Baltic Sea Coast in Latvia, their sensitivity, threats, protection and sustainable management and Natura 2000 sites. It was finished in June 2006.

Both films were produced by the studio "Jura Podnieka studija" (editor K. Goba)

**Continuation/additional results.** There is very large material gathered during the project time, and it was not possible to include all of it in the second film. The University of Latvia plans to cooperate with K.Goba for the production of another, longer film.

**Additional information.** Both films in Annex 7.

#### **Action E6. Creation and updating of vortal about the LIFE project and about coastal habitats.**

**Results.** At the end of the project the vortal about the LIFE project and about coastal habitats has been redesigned as a shell which integrates several components: static web pages, photo gallery, on-line questions & answers book, on-line questionnaires, map based data warehouse, ftp server, search page.

As the project has been finished at the end of July, 2006, the „Project's news” section has been eliminated. The work at the project's vortal is still going on.

Most of the information is kept as a **static web pages** (html or pdf files).

The photos of habitats, plants, animals and fungus are organised in an **interactive photo albums**. This album is powered by a perl script redesigned specially for the project purposes. As the base for the photo album an existing one („Nature of Latvia”) was used. More than 500 new images has been added to this album during the project period. The photos has been sorted by categories. Short descriptions has been added to these photos.

Beside the original photo album interface the photos may be searched by location on the map of the sea coast. The same script is used also for browsing the symbols concerning the project as well as different maps. The base URL is <http://piekraste.daba.lv/EN/foto/albumi.shtml>.

The **on-line questions & answers book** (QAB) is one of the scripts specially written for project purposes. It is designed for asking the questions and seeking the answers. The questions may be categorised. The QAB has been launched on February 10, 2005. To make this page more attractive for users, the questions and answers from project members' e-mail archives has been added to this QAB. During the last to years the QAB turns to place where you can ask the

experts different nature related questions. The scope of this book has overcome far outside the project's field of interests attracting people not connected to the project as an volunteer experts.

The base URL is <http://piekraste.daba.lv/scripts/ViesuGramata/vg.cgi?v=g&s=j&l=en>.

Five **on-line questionnaires** have been added to the web site. Two of them has been taken from Action A1. The on-line questionnaires are ignored by web-page visitors.

The base URL is <http://piekraste.daba.lv/EN/aptaujas.shtml>.

**Map based data warehouse.** Specially for project purposes an originally designed and scripted data warehouse was created. The outcomes of different project actions may be located by the help of map based navigation page. The base URL is [http://piekraste.daba.lv/EN/ka\\_karte.html](http://piekraste.daba.lv/EN/ka_karte.html)

**Ftp server.** For storing and serving large documents the ftp server is used. Visitors may download various project materials including documentary film „Green City”.

The base URL is <ftp://piekraste.daba.lv/piekraste/>.

Alternative URL is <http://piekraste.daba.lv/ftp/piekraste/>.

A **search engine** is integrated in the project's portal. This page is Latvian-only and may not so user-friendly to foreign visitors. It is powered by the Fluid Dynamics Search Engine. At the same time the portal is heavily visited by different search spiders, e.g. *Google*. The visitors may use these well-known search engines for selecting the topics of their interest.

The base URL is <http://piekraste.daba.lv/EN/meklee.html>.

**Added value.** To perl scripts was created from scratch and one script was redesigned specially for the project. The source of the scripts are freely available from the project's web page. The documentation and comments are both in English and Latvian.

- 1) script for creating photo albums  
<http://piekraste.daba.lv/scripts/atteli/albums.cgi?c=1&l=en>
- 2) script for creating questions and answers book  
<http://piekraste.daba.lv/scripts/ViesuGramata/vg.cgi?c=1&l=en>
- 3) script for creating questionnaires and on-line registration forms  
<http://piekraste.daba.lv/scripts/aizpildi/sagatve.cgi?c=1&l=en>

All of them were released under following license:

```
### Copyrights #####
# Script for {purpose of the script} #
# All rights reserved #
# #
# This script could be freely distributed and used #
# under following conditions: #
# 1) the script should contain this copyright message; #
# #
# 2) this script and its derivatives must be free of charge; #
# #
# 3) this script could not be included in comercial software. #
# #
# The base URL: http://priede.bf.lu.lv/scripts/{location of the script} #
# #
# The author is not responsible for any kind of a text #
# published with this script #
```

```
# Whichever damage occurred when using this software, #
# the author has no responsibility at all. #
#####
```

These scripts may serve as useful tool for small scale web pages.

**Additional information.** <http://piekraste.daba.lv/>

### **Action E7. Preparation and publishing of book.**

**Time plan:** July, 2005 – June, 2006.

**Planned:** a book about coastal habitats of Community importance and their protection.

**Complications.** The book is not published because of the lack of finances. The beneficiary could not ensure the prefinancing at full extent. The main reason is that the University of Latvia is a state budget institution. According to the legislation of Latvia, it is not legally allowed for the state institution to loan the money. Also it is not allowed for the third party to lend finances for the state institution.

Faced with the lack of finances we decided to prioritise these actions which were not completed as well actions which were connected to contracts with municipalities and also which unrealisation would influence the success of other actions significantly.

Information on the coastal habitats of Community importance has been published also in project website, booklets, leaflets, films, disseminated in seminars, TV, radio. We hope that the project aims were not influenced significantly due to failure of this action.

### **Action E8. Establishment and installation of information signs.**

**Time plan.** July, 2003 – March, 2006.

**Planned:** 620 information signs.

**Results.** All 620 signs were installed. There are 2 types of information signs.

1. The “small information signs” including the information on the cofinanciers (in Latvian and English) of the project, **220 pieces**. Signs are in Latvian and English and includes also LIFE and Natura 2000 logos They were fixed to all constructions build by our project within actions C3, E1, E10 – E21.

2. Signs “Natura 2000 – protected nature area of European Community importance” (in Latvian). The sign includes also LIFE and Natura 2000 logos, **400 pieces**. Signs were installed in sites which are popular for visitors, in habitats of Community importance, in National Parks “Slītere” and “Kēmeri”, Nature Parks “Pape” and “Piejūra”, Nature Reserves “Vidzemes Akmeņainā Jūrmala”, “Randu pļavas”, “Ziemepe”.

**Additional information:** pictures of information signs in Annex 3.

### **Action E9. Publishing of Layman’s report.**

**Time plan:** January 2006 – June 2006.

**Planned:** Layman’s report published in 3000 copies and in electronic version.

**Results.** Layman’s report was published in 3000 copies, 16 A4 pages (English and Latvian text together). It tells about the LIFE project, on the questionnaire results, habitat mapping results,

management plans for Natura 2000 sites, restoration and management of coastal grasslands, control of invasive species, habitat management in heavily used areas (car parks, resting places, pedestrian trails, information signs), rising of public awareness.

**Additional information:** Layman’s report in Annex 8. Published also on project website.

**Introductory chapter for actions E10, E12 – E21 – establishment for small-scale tourism infrastructure, for the conservation of habitats of Community importance.**

Small-scale infrastructure (pedestrian trails, resting sites, stairs, car parking sites, barriers etc.) were constructed in accordance to habitat maps (Actions A2, A3), after detailed study of each particular site and after the elaboration of technical designs (Action A6).

In **technical designs** all the necessary management measures of the every particular site were planned. The implementation of technical designs was planned in scope of available finances and in accordance to the priorities.

In most of the municipalities, the necessary management measures extended the finances of our project. Nevertheless, those activities were planned in technical designs (it did not increase the time and budget of the elaboration of technical design). Later, the priorities were decided, and only the most necessary constructions built by the LIFE project. Municipalities are interested to continue the implementation of the prepared technical designs, using their own finances or in the scope of other projects.

Various constructions have been built in 12 municipalities. Here, 7 sites of works are located in **Natura 2000** sites and 1 site partly, and 4 sites are outside of Natura 2000 (Table 6).

Common reasons for the works outside of Natura 2000:

1. In all sites, there are priority protected habitats which “favourable conservation status for natural habitats and species of wild fauna and flora of Community interest” (Habitats Directive) must be ensured.
2. In all these sites, very valuable and diverse Natura 2000 sites are in vicinity. Small-scale infrastructure built by our project serves for the concentration of visitors outside of Natura 2000 sites.
3. Sites of works were chosen after the complex analysis of the situation of each part of the coast. In all sites, there is a very intensive visitor pressure and almost no infrastructure for visitors. Coastal habitats are very fragile and sensitive. If there will no infrastructure in the most visited sites outside of Natura 2000 and the only infrastructure will be in Natura 2000, these sites will receive all the visitors. Too many visitors will be concentrated in the most diverse and valuable sites which will threaten the conservation of priority protected habitats of Community importance.

Table 6. Explanation of the Natura 2000 status of the project sites.

Municipality	Subsite	Action	Location at proposed Natura 2000 sites
Ainaži	Ainaži Town	E16	All is located in Nature Reserve “Randu pļavas”
Carnikava	Lilaste, Mežciems	E19	All is located in Nature Park “Piejūra”
Jūrmala	Nature Park “Ragakāpa”	C8, E21	All is located in Nature Park “Ragakāpa”

Lapmežciems	1. Coast near Siliņupe 2. The "14 <sup>th</sup> Kilometre"	E12	All is located in National Park "Ķemeri"
Medze	Coast near Anna River	E13	<b>Outside</b> of Natura 2000. In Medze, important habitats of Community importance (grey dunes, white dunes) have been concentrated in narrow belt, surrounded by agricultural land and settlements. Site is too small for the establishment of Natura 2000. There is a very large number of visitors in this small area, mainly from Liepāja city. The small-scale infrastructure for visitors is necessary for the conservation of habitats of Community importance. There is Natura 2000 site in neighbouring municipality Vērgale. Infrastructure in Medze move away the visitors from Ziemeņu Nature Reserve located in Vērgale.
Pāvilosta	At the right and left side of Saka River	E15	<b>Outside</b> of Natura 2000. All infrastructure is for the conservation of the widest and most diverse grey dunes in Latvia. Establishment of 4 microreserves was proposed on October 2004 (Action A10). This site was also proposed as Natura 2000 site on the Biogeographical Seminar on December 2005. Therefore the <b>proposal of the establishment of nature reserve in Pāvilosta grey dunes</b> is being prepared by the Ministry of Environment, in cooperation with our project (2006).
Rīga	Daugavgrīva	E10	All is located in Nature Park "Piejūra"
Roja	1. Ģipka 2. Roja	E17	1. Located <b>on the border</b> and partly in the Nature Reserve "Ģipka". 2. <b>Outside</b> . The site of works in Roja, large number of visitors threaten habitats of Community importance - white and grey dunes. This is the most popular recreation site for the visitors of Talsi District. The site is too small for the establishment of Natura 2000. However, there is an important breeding habitat for <i>Bufo calamita</i> 1 km to North; visitors must be concentrated in Roja to preserve it.
Rucava	Pape	E20	All is located in Nature Park "Pape".
Salacgrīva	Zvejnieku parks, outlet of River Vitupe.	C6, E16	<b>Outside</b> . In Salacgrīva, works were planned in sites where with high concentration of habitats of Community importance. There is a high visitor pressure. The infrastructure built is connected with other infrastructures built by the municipality. The concentration of visitors in these sites is very important for the mowing away of visitors from Natura 2000 site "Randu pļavas".
Saulkrasti	Coast between outlets of Rivers Inčupe un Pēterupe	C5, E14	<b>Outside</b> . Here, large number of visitors threatens priority protected habitat of Community importance (very old and diverse boreal forest on dune), and the establishment of small-scale tourism infrastructure is necessary for the protection of it. At the same time, this infrastructure moves the visitors away from Natura 2000 site Piejūra Nature Park (bordering).
Užava	Užava Nature Reserve	E18	All is located in Nature Reserve "Užava".

**Action E10. Raising of public awareness regarding Boreal Baltic coastal meadows and white dunes in the Vakarbuļi and Daugavgrīva Nature Reserves in Riga.**

**Time plan:** July 2003, 2003 – December 2005.

**Planned:** Paths on wooden base, stairs, barriers on unplanned roads, resting places, bird watching tower, educational botanical path.

**Related actions:** A6, C2, C3, D1.

**Results.** Management system is established.

**1. Unplanned: the reconstruction of dam.** In Daugavgrīva Nature Reserve, the dam crossing the wetland is the only road to the sea. It is also the road for the transport of materials for the planned constructions. During the storm of January 2005, the dam was damaged. That endangered the implementation of Action A10. The communication with Rīga City council was started, to attain the reconstruction of dam, on it's own finances. The dam was reconstructed in September, 2005.

## **2. Building works.**

Two price quotations were organised and 2 contracts signed for the building works – with enterprise SIA “Uzars” (for paths, covered with gravel) and with SIA “Fiberglass” (other works).

The following constructions have been built: paths covered with gravel (1523 m<sup>2</sup>), fencing for cattle (length appr. 1200 m), educational path (780 m), boardwalks covered with wood (221,5 m), wooden platforms, shelter for cattle, bird-watching tower, large information boards (4), thematic information boards (5 in botanical path, 1 in bird-watching tower, 1 in grassland at the fencing), leading signs (10), benches (26).

The **bird observation tower** was designed in cooperation with representatives of the Society of Friends of Handicapped People “Apeirons”. The entrance to the tower is a 50 m long raised boardwalk, which can be used by people with wheelchairs. This is the first such a watching tower in Latvia, where handicapped people have a possibility to get on.

There was a very positive response from visitors and officials and publicity in newspapers and television.

Cooperation with local residents was attained; they will look over the constructions built. Also local policemen confirmed that they will look after the constructions, especially the tower.

**Delays.** The building was planned to be finished on December 2005 but works were stopped because of snow, and **were finished in April 2006.**

**Continuation.** The Rīga municipality (Department of Environment) will maintain all the constructions built.

**Additional information:** pictures in CD disc in Annex 3.

**Action E11. Restoration of natural habitats in the area of Kolkas rags** cancelled according to First Additional Clause of 8 December 2005.

## **Action E12. Restoration and management of wooded dunes and white dunes in Lapmežciems.**

**Time plan:** October 2003 – December 2005.

**Planned:** Paths, one small bridge (footbridge), resting places, parking site, barriers on unplanned roads.

**Results.** Building was finished on November, 2005. Constructions were established in 2 sites: in Kupskalnu Nature Park, and in “The 14th Kilometre of the Talsi Road”. Management system is established, deterioration of wooded dunes and white dunes stopped.

**In Kupskalnu Nature Park** (at the outlet of Siliņupe River), following constructions were built: boardwalks with wooden cover (312 m), small bridge across the Siliņupe River (14 m),



barriers along the boardwalk (52 m), strengthening of dunes (woven branches 85 m, decked branches 27m<sup>2</sup>).

**In “The 14th Kilometre of the Talsi Road”** (“Gausā jūdze”), following constructions were built: barriers along the boardwalk (13 m), wooden boardwalks (268 m), stairs (46 m), strengthening of dunes (woven branches 365 m, decked branches 255 m<sup>2</sup>).

Information boards (2), information signs (4) and pictograms (20) were established by SIA “Dabas Takas”. Local residents accepted the construction very warmly.

Additional constructions included in technical designs are: resting sites in Kupskalnu Nature Park and “The 14th Kilometre”, and observation platform and some barriers in “The 14th Kilometre”.

**Deviations.** Dune strengthening was not planned in the project application but it was found as necessary in sites with high visitor pressure, for the protection of habitats of Community importance, after the recommendations of geomorphologist prof. Eberhards.

**Continuation.** The municipality wants to continue the implementation of technical designs using its own finances. It is also maintaining the constructions.

**Additional information:** pictures in CD disc in Annex 3.

### **Action E13. Restoration and management of wooded dunes, grey dunes, embryonic and white dunes in Medze.**

**Time plan:** October 2003 – December 2005

**Planned:** paths, resting sites, car parking site, and barriers

**Results.** Following was built: paths on gravel base (609 m<sup>2</sup>), paths on wooden base (500 m<sup>2</sup>), resting place (2 benches, 1 table, 1 fire place, 1 waste bin), 2 stairs, 3 information boards (1 large, 2 small), barriers.

**Variations/continuation.** Municipality will maintain all the constructions built.

Car parking site was planned, but not built because of the lack of finances. To implement the technical design, the contract between the University of Latvia, the municipality and the landowner of the site was signed. Landowner received the technical design from University of Latvia. According to the contract the car parking site should be built within one year.

**Additional information:** pictures in CD disc in Annex 3.

### **Action E14. Promotion of public awareness regarding conservation of wooded dunes and white dunes in Saulkrasti.**

**Time plan:** October 2003 – June 2005.

**Planned:** Stairs, raised paths, barriers, renovation of observation tower.

**Related action:** C5.

**Results.** Planned constructions were established in 2004. Following constructions were built: paths with base of wooden chips (928 m<sup>2</sup>), raised paths on wooden base (100 m<sup>2</sup>), one bridge (17 m<sup>2</sup>), one resting site (one table, 2 benches), stairs (170 m). Along the paths with wooden

chips, fences of woven branches are constructed. Observation tower was renovated and observation platform (35 m<sup>2</sup>) was built.

**Additional works.** In 2005, the information on 2 boards was renewed (because of the need to update the information and because 1 board was damaged). One information board was renewed by finances of our project (money was saved for this purpose), the second – by finances of Saulkrasti municipality.

During the storm of January 2005, two stairs were damaged (at the White Dune and at Selgas Street). The stairs were reconstructed (60 metres) within the scope of the budget of this action.

Site was visited by Commission Review Mission in June 2004.

There were no damages of information boards or other constructions in year 2006.

**Variations/continuation.** Municipality will maintain all the constructions built.

**Additional information:** pictures in CD disc in Annex 3.

### **Action E15. Restoration and management of grey dunes and white dunes in Pāvilsta.**

**Time plan:** October 2003 – December 2005.

**Planned:** network of paths, car parking places, barriers on unplanned roads.

**Results.** Action was finished in October, 2005. Works were organised in 2 localities – at the left and right side of Saka River.

**At the left side of Saka River** (Ostmalas Street 1a), following constructions were built: car parking site (1200 m<sup>2</sup>, covered with gravel-dolomite mixture); edges around the car parking site (wooden planks, 79 m); barriers around the car parking site (27 treads, 81 m in total; one can sit on the barriers); 2 wooden barriers on illegal roads; 1 wooden barrier (which can be opened), 1 resting site including table, fire place, benches at the table and at the fire place; site for firewood; 1 information board.

**At the right side** of Saka River, following constructions were built: 2 boardwalks, 50 metres each; 1 information board.

The ground cover of the car parking site was established by regional enterprise SIA “Aizputes Ceļinieks”. Wooden constructions were established by local enterprise I/U “Gabaliņa Daiņa darbnīca”.

During our cooperation, the awareness of the municipality on the protection of grey dunes with means of habitat management has raised. Therefore the municipality in 2006 will continue to build further constructions.

The building of another car parking site was planned in the project application. However, the municipality built the car park using its own finances, in years 2002 – 2003.

**Continuation.** Municipality will maintain all the constructions built.

Due to lack of finances, only the most necessary part of the network of paths was built. In spring 2006, the municipality applied for finances from the Environmental Protection Fund of Latvia, got the money and built 2 more boardwalks (boardwalk to the sea 223 m, barrier 130 m). The municipality will continue the implementation of technical designs, step by step.

**Additional information:** pictures of restoration and management works in Annex 3.

**Action E16. Raising of public awareness regarding conservation of Boreal Baltic coastal meadows, embryonic dunes and white dunes in Ainaži and Salacgrīva.**

**Time plan:** July 2003 – December 2005.

**Planned:** network of paths; resting sites (4); parking sites (3); barriers. Related actions C6, D1, E16.

**1. RESULTS IN SALACGRĪVA.**

In Salacgrīva municipality, works can be divided in 4 types:

1. Various constructions in Zvejnieku Parks,
2. Boardwalks and benches in wooded dunes at the beach of Salacgrīva town,
3. Barriers in various sites in municipality;
4. Educational path in wooded dunes at the beach of Salacgrīva town.

**1.1. In Zvejnieku Parks,** following constructions were built: 3 resting sites (each including 1 table, 2 benches, waste bin); 2 resting sites around the fire place (5 benches and waste bin); 25 m<sup>2</sup> of ground covered with wooden chips; 3 boardwalks which lead to the sea over the wooded dunes (278 metres of 3 m wide boardwalks, 70 metres of 1.5 m wide boardwalks); stairs (with guard-rail ) at the steepest sites of wooded dunes (172 m); 2 resting sites with benches; 1 information board.

Wooden constructions were established by enterprise I/U “Gabaliņa Daiņa darbnīca” which constructed similar services in Pāvilosta (Action E15), and by N. Tiesnesis.

**1.2. In wooded dunes at the beach of Salacgrīva town,** following constructions were established: 3 boardwalks (110, 220 and 172 m); 25 benches.

**1.3. In various sites along the coast at Salacgrīva municipality, barriers** were installed (to protect habitats of Community importance from the driving). Localities of barriers were chosen after discussions with staff of North Vidzeme Biosphere Reserve (controlling this area) and Joint Stock Company “Latvian State Forests” (manager of these forests).

Barriers of 2 types were established: barriers which can be unlocked (5 pieces, constructed on roads which can be used by municipal or state vehicles to access the beach) and simple barriers (31 pieces; constructed on illegal roads). Barriers were installed by local enterprise SIA “Mičs un Partneri”. During construction, 2 barriers were broken by drivers, and reconstructed by our project.

**1.4. Educational path** was built in spring 2006. It contains: boardwalk with base of wooden chips and with wooden base (300 m, in wooded dunes), 1 playground for children, 7 information boards (information on habitats of Community importance and coastal development), 2 “interactive elements” – “birds” and “the barometer”.

**Variation.** Car parking site was not built (reasons explained in third progress report), and network of educational paths was built instead.

**2. RESULTS IN AINAŽI.**

In spring 2006, following was built: 335 m of wooden boardwalks of various widths (1.25 m – 3.75 m, depending on the visitor pressure); 250 m of boardwalks with wooden chips; 7 information boards; 2 resting sites (groups of benches, 1 table, fireplace). Boardwalks lead

through grey dunes, wooded dunes and foredunes, from town to the sea. Resting sites are in place where people formerly were making fires illegally.

**Additional information:** pictures in Annex 3.

### **Action E17. Public awareness raising regarding wooded dunes and white dunes in Roja.**

**Time plan:** October 2003 – June 2005.

**Planned:** network of paths, stairs, resting places, car parking place, and barriers.

**Results.** Building works were **finished in year 2004**.

Small-scale infrastructure was established in 2 sites in Roja municipality – in Roja town and in Ģipka village.

1. In Roja town, following construction were built: 2 m wide boardwalks 114 m, 3 m wide boardwalks 27 m, 1 information board.

2. In Ģipka village, following was built: 2 m wide boardwalks 138 m, 3 m wide boardwalks 76 m barriers (145m) and drainage (9m), the flattening of gravel of car parking place (270m<sup>2</sup>).

**Variations.** The road to car parking site and the technical design of car parking site was financed by Roja municipality. Our project finished the car parking site and the small-scale infrastructure around it. The money saved in Ģipka was used at the next site in **Roja town** (details explained in interim report).

**Additional results.** Technical designs covered more construction works as were implemented by our project. In year 2005, Roja Municipality continued the implementation of technical designs using it's own finances and built the rest of boardwalks and also toilets.

**Additional information:** pictures in CD disc in Annex 3.

### **Action E18. Restoration and management of grey dunes and white dunes in Užava.**

**Time plan:** October 2003 – December 2005.

**Planned:** network of paths, barriers, car parking place, resting sites.

**Results.** Works were planned in accordance to the management plan of Užava Nature Reserve (Action A8). In autumn 2005, following constructions were established: 4 boardwalks (390 metres together); barriers along the dunes to stop driving in dunes (1590 metres); 35 barriers on illegal roads; 2 resting sites (each is including 1 table, 2 benches, waste bin, fire place); 4 benches (one at each boardwalk); 2 information boards.

**Variations.** The building of car parking site was not accepted by Ventspils Regional Environmental Board (reasons explained in the third progress report).

**Additional results.** The building of small-scale infrastructure was continued by Joint Stock Company "Latvian State Forests", with it's finances, in accordance to the sketch design elaborated by our project.

**Additional information.** Pictures on works in CD, Annex 3.

**Action E19. Restoration and management of wooded dunes, western taiga and white dunes in Carnikava.**

**Time plan:** October 2003 – December 2005.

**Planned:** Network of paths, resting sites, barriers, car parking site.

**Results.** The building was finished in December, 2005. Small-scale infrastructure was built in 2 subsites in Carnikava municipality: in Mežciems and in Lilaste. Constructions were built by local enterprise SIA “Pekabo”.

**In Mežciems,** following constructions were built: resting site at the slope of coast (including wooden bench); dune strengthening (vowed branches 480 metres, cover with wooden chips 1200m<sup>2</sup>); barrier (3 m, to stop driving on pedestrian road).

**In Lilaste,** following constructions were built: wooden stairs (4.9 m long, 2 m wide) and wooden boardwalk (length 72 m); barriers around the car parking site (10 barriers; each barrier is 3 metres long); resting site - observation platform (on base of remains of old Soviet Army bunker).

Information boards (one in each site) were installed by SIA “Lawsare”.

**Variations.** The building of car parking site was not possible because there was no available land and because it would exceed the finances of our project. The constructions were planned to reach the best and cost-efficient protection of habitats of Community importance within the budget of this action.

Technical designs covered more construction works as were implemented by our project. The unbuilt constructions in Lilaste are - more boardwalks (including the trail for handicapped people) and more barriers. Carnikava municipality wants to implement the technical designs at full extent.

**Additional information.** Pictures on works in CD, Annex 3.

**Action E20. Restoration and management of white dunes, wooded dunes and western taiga in Rucava.**

**Time plan:** October, 2003 – December, 2005.

**Planned:** network of paths, resting sites, car parking site, barriers.

**Results.** All planned constructions have been built in years 2004 and 2005.

Locality of works is at the Pape lighthouse, which is a popular site for recreation.

A complex on small-scale infrastructure includes: a car parking site (covered with gravel, 30 cars), barriers around the parking place, wooden boardwalks (80 m), watching platform, and an information board. The road of the main entrance has been enlarged and other roads are closed. On 4 illegal roads, road signs “the driving in is forbidden” have been installed. 3 resting sites were established (one of them with fire place). In car parking site, parking site for 5 bicycles was constructed.

This site was visited by the Commission review mission in July 2005.

**Continuity.** Municipality maintains the constructions built.

**Additional information.** Pictures on works in CD, Annex 3.

**Action E21. Raising of public awareness regarding protection of wooded dunes, western taiga, white dunes and grey dunes in Jūrmala.**

**Time plan:** July 2003 – December 2005.

**Related action:** C8.

**Planned:** network of footpaths, recreation places, and barriers.

**Results.** For the building of **network of boardwalks, stairs, resting sites, information boards** the technical designs were elaborated and approved in year 2004, implemented in years 2004 and 2005. All works were planned in accordance to the management plan of Natura 2000 site Nature Park “Ragakāpa”.

The building was started on November 2004 and finished on 29th April, 2005. Following constructions were built: wooden boardwalks (1835 metres), observation platforms (130 m<sup>2</sup>), wooden stairs (305 m); benches (13).

Boardwalks lead people along the edge of the Ragakāpa – high wooded dune, covered with old forest. During the summer 2005, the number of visitors in Ragakāpa has grown remarkably. Even people from Rīga travel to Ragakāpa to have a walk. Along the boardwalk, 7 information boards are installed, which educate visitors on local plants, insects, structure of the natural forest, landscapes, and protected habitats of Community importance.

In 2005, technical design for the **observation tower** was elaborated by SIA “Archis”, accepted by Jūrmala Building Board on 2nd September 2005. The tower will be 30 metres high, located nearby boardwalks, which were constructed earlier.

**Awards.** For the successful management of Ragakāpa Nature Park, Jūrmala municipality has received the award “The Apple 2005” which was given by the Ministry of Environment.

**Variations.** It was decided to build bird observation tower instead of car parking site (we explained it in letter of 13th January 2005). The building of tower is included in the management plan of Nature Park “Ragakāpa”, accepted by the Minister of Environment (2004).

The planned costs of the tower exceeded the possibilities of our project. However, Jūrmala municipality wanted to participate in the building of tower with its own finances.

For the building of tower, unexpected constraint was the inconsistency of the building site with the Regulations “On the Individual Use and Management” for Ragakāpa Nature Park (accepted by the Cabinet of Ministers (10.08.2004). Due to mistake, these regulations did not allow the land transformation for the building in this area. In August 2006, the Regulations were changed by the Cabinet of Ministers (this was managed by the Ministry of Environment), and now the building is possible.

The 3-sided contract on the building works has been signed, between the University of Latvia, Jūrmala City Council and the SIA “Energoceltnieks”. Materials have been purchased and the constructions are being established. The building must be finished until the end of year 2006.

**Continuation.** 1. All the constructions built are being managed by municipality. 2. Tower will be built by the municipality.

**Additional information:** pictures of constructions in Ragakāpa Nature Park – in CD in Annex 3. Contract on the building of tower – in Annex 2.

## **Action E22. Participation in seminars and conferences.**

**Time plan:** January, 2003 – July, 2006.

### **Results. 1. Participation in LIFE COOP projects**

1. We had been partners in LIFE Co-op project "Experience exchange on habitat management among Baltic LIFE-Nature projects" (LIFE2003NAT/CP/LV/000010), managed by Baltic Environmental Forum (BEF). On September 23-24, 2004, in Haademeeste (Kabli, Estonia) we participated in international seminar "Management of coastal habitats and grasslands – experience exchange for improved know-how". Activities of our project: oral presentation, dissemination of project materials etc.

On 7 – 8th April, 2005, we participated in the final event, which was held in Jūrmala (2 participants). We also participated in the compiling of the final publication of this project. Gain: very practical experience about the management of coastal habitats. Contacts with other projects.

2. We were partners in LIFE-Nature Co-op project "Dissemination of ecological knowledge and practical experiences for sound planning and management in raised bogs and sea dunes" (LIFE03 NAT/CP/NL/000006) which was managed by University of Nijmegen (Netherlands).

Two persons of our project participated in the workshop "Dissemination of ecological knowledge and practical experiences for sound planning and management in raised bogs and sea dunes" on 5-8 October 2004 in Nijmegen, Netherlands. Activities of our project: poster, oral presentation, and participation in discussions.

The second workshop of the project was held from 22nd to 29th August, 2005 in Latvia and Estonia. In this seminar, more than 100 researchers and managers from 13 countries were participating. We organised the field trip in Latvian dunes (23 – 24th August), prepared the travel-guide, held 3 presentations (one in Latvia and two in Estonia).

Gain: experience on the natural processes, management and restoration of dunes; contacts with dune researchers from the Netherlands and Germany.

### **Study tours to other LIFE project sites**

1. Meeting of LIFE experts from Latvia and Finland (18.08. – 21.08.2003) was organised by Pori city council, Finland. Participants: 2. Action: Project presentation (1 hour), visit to sites of 2 coastal LIFE-Nature projects (Pori and Viiki Vanhankaupunginlahti, Helsinki). Gain: Experience about management of coastal areas – grazing, building of paths, bird-watching towers, information signs and boards etc.; further contacts and consultations from Pori city council. The bird watching tower in Rīga and also boardwalks in several sites were built using the experience of Pori municipality.

2. On 29 – 31st October, 2005 we visited LIFE-Nature project "Natura 2000 site conservation and management on the Lithuanian coast" (LIFE05 NAT/LT/000095) in Kuronian Spit National Park (in Lithuania). We discussed the management and development of habitats in Kuronian spit and exchanged management experiences with vice-director A.Kvietkus and inspector R. Drungilas.

### **Other international events.**

1. International conference on "Integrated coastal zone management in Mediterranean tourist regions" was organised by LIFE project "Med-Coasts S-T Project" in Calvia (Spain); 24.01.2003. Number of participants from our project team: 2. Our action: taking part in

sessions; distribution of leaflet about our project. Gain: meeting similar projects and EU experts; information about key commitments for the EU countries concerning coastal protection and tourism policy.

2. Seminar “LIFE-Nature: experiences & future plans of the Baltic states and EU member states” was held in Vilnius (Lithuania), 07.03 – 08.03 2003. Number of participants: 1. Action: presentation of project (20 minutes); publication. Gain: many practical advises and experience for the successful management of LIFE-Nature project.

3. Coalition Clean Baltic 14th Annual Conference “Coastal management and spatial planning – conflicts and solutions” was organised in Renda (Latvia); 16.05.2003. Number of participants: 3. Our action: presentation “Habitat maps for the management of the sea coast” (20 minutes), work in sessions. Gain: information exchange on the problems of coastal protection in neighbouring countries.

4. Danish Dune Heath workshop (08.09.-11.09.2003) was organised by LIFE-Nature project “Restoration of dune habitats along the Danish West coast” (LIFE02/NAT/DK/8584). Participants from our project: 3. Action: presentation (30 minutes). Gain: experience about management of coastal habitats esp. grey dunes.

5. Conference “Implementation of national and international environmental protection requirements in the Baltic Sea coastal areas” (Rīga, 21.11.2003) was organised by Coalition Clean Baltic (network of NGO). Participants: 3. Action: presentation (20 minutes). Gain: valuable information on the protection of coastal habitats in other Baltic countries.

6. From April 10 to 12, 2006 in Jūrmala, Latvia under the framework of EU BSR INTERREG III B Neighbourhood Programme project “Coastal Sustainability as a Challenge”, Institute for Environmental Science and Management organised a Research School in Coastal Communication,. This Research School was devoted to: “Coastal Communication: from Theory to Partnership Practice”. Participants from the Baltic Sea region presented. Participants: 2. Action: presentation (20 minutes) and publication. Gain: information exchange of valuable information about protection of coastal habitats in other Baltic countries and about the raising of public awareness.

### **Local events.**

Here only these events where we took part actively are listed.

Seminar “Management of strictly protected nature areas” was organised by Emerald project and by LIFE-Nature project “Implementation of management plan for the Lake Engure Nature Park” in Engure, 25.08. – 28.08. 2002. Participants: 2. Action: presentation about the project. Gain: learning the experience of Engure LIFE project.

The meeting of deputies of Rīga Council and residents of Rīga was organised 12.02.2003. Participants: 5. Action: presentation about the protection of Piejūra Nature Park (15 minutes); answering questions submitted by residents. Conclusion: there is a big misunderstanding of opinions between of residents and deputies of Rīga.

Conference “The coastal protection and humanity” was organised by Environmental Protection Club of Latvia. Participant: 1. Action: project presentation (20 minutes). Gain: contacts with various groups of people. Conclusion: the international movement “Blue Flags” is a tool for the affecting the managers of beaches, for the sustainable management.

Conference “The cultural and historical heritage in lower part of the River Daugava valley and problems of it’s conservation”, 15.05.2003, was organised by Rīga City Council and by Latvian



Fund of Culture. Participant: 1. Action: presentation “Piejūra Nature Park” (30 minutes). Conclusions: the coast must be protected in complex with the protection of cultural and historical monuments etc. Problems can arise if the planned terminal (oil shipment) will be built.

Conference about large grazing animals and their role for the management of grasslands was organised by North Vidzeme Biosphere Reserve (Salacgrīva, 13.11.2003.). Participants: 2. Action – presentation (30 minutes). Gain: valuable information about the management of grasslands in Estonia, Latvia and other sites; much practical information.

Seminar “The protection and management of Ziemeļgauja Valey”, organised by LIFE-Nature project (Rīga, 26.01.2004.). Participants: 4. Action: presentation (20 minutes). Gain: various information on management of habitats.

Seminar “Administration of Natura-2000 sites” was organised by Nature Protection Department, Ministry of Environment (Rīga, 11.05.2004.). Gain: information about possibilities and problems of the management of protected nature areas. Representative of the project took part in the group discussions and proposed that the administration in large protected areas should be financed by state; however, the management in small protected areas should be organised by municipalities or regional environmental boards.

Seminar about various aspects of the protection of the sea coast was organised by Environmental Protection Club (NGO) in Pāvilosta (13.05.2004.). Action: presentation (20 minutes).

Seminar “Measures of agro-environment” was organised by the Ministry of Agriculture (Rīga, 08.06.2004.). Action: presentation (10 min.).

Seminar “Management plans and their implementation” was organised by Nature Protection Board. Time: 21 – 22 June, 2004. New trends and requirements in the development of management plans.

Seminar “On the processes at the Sea” was organised by the Environmental Protection Club of Latvia. Time: 12th April 2005. Place: The Ministry of Environment, Rīga. Activities of our project: speech “Individuality of the nature protection at the Latvian coast” (B.Laime).

Seminar “Protected coastal habitats” was organised by State Environmental Inspection on 14-15th June 2005. Audience – environmental inspectors and other staff of state environmental institutions. In field trip, B.Laime and L.Engēle explained which coastal habitats are protected and how to recognise and protect them. Visited sites - Engure, Bērzciems, Kaltene, Ģipka, Kolka, Lielirbe, Lilaste, Saulkrasti, Dunte, Vitrupe, Kuiviži, Ainaži.

Seminar “Complexes of coastal habitats and *Juniperus communis* formations, their protection” was organised by Nature Protection Board on 6-7th October, 2005 in Jūrkalne. Audience – local landowners and representatives of state environmental protection institutions. B.Laime presented a lecture “Protection and management of beach and open coastal dune areas in Latvia”.

Seminar “The inventory of woodland key habitats” was organised by the State Stock Company “Latvia’s State Forests” (Slampe, 26.02.2004.-2.04.2004.). One representative of the project learned the standard method of inventory of woodland key habitats. These skills are very necessary for the evaluation of forest habitats of Community importance and for the deciding of their best protection regime.

## Scientific conferences

In 62th scientific Conference of the University of Latvia, we took part with 3 reports about various aspects of the project. 1. The plant and lichen communities in grey dunes of Užava Nature Reserve (A.Piterāns, B.Laime, I.Berga, A.Žeiviniece, 11.02.2004.). 2. Mapping of coastal habitats (R.Birziņa, K.Kalviškis, B.Laime, D.Tjarve, V.Znotiņa, 05.02.2004). 3. The role of municipalities and society for the coastal conservation (B. Laime, R. Birziņa, D. Tjarve, V. Znotiņa, K. Kalviškis, 12.02.2004).

In 63th scientific Conference of the University of Latvia, we took part with a report “Denotations for the elaboration of maps of coastal habitats” (K. Kalviškis, R. Birziņa, B. Laime, D. Tjarve, V. Znotiņa, 28th January 2005; Rīga).

**Additional information:** pictures in CD disc in Annex 3.

## F. OVERALL PROJECT MANAGEMENT

### Action F1. Administration of the project.

**Time plan:** October 2002 – June 2006.

**Planned:** project administration and cooperation with other projects.

**Results.** Project was administrated successfully.

The administration and the project staff have been characterised in the previous reports (there are no significant changes in 2005 and 2006).

**Project team** coordinated the implementation of general actions – habitat mapping, finances, regional actions, monitoring, public awareness. Project team included also the regional coordinators which coordinated works in 3 regions (Rīga, Liepāja, Vidzeme), in cooperation with 2 partners (Fig.3).

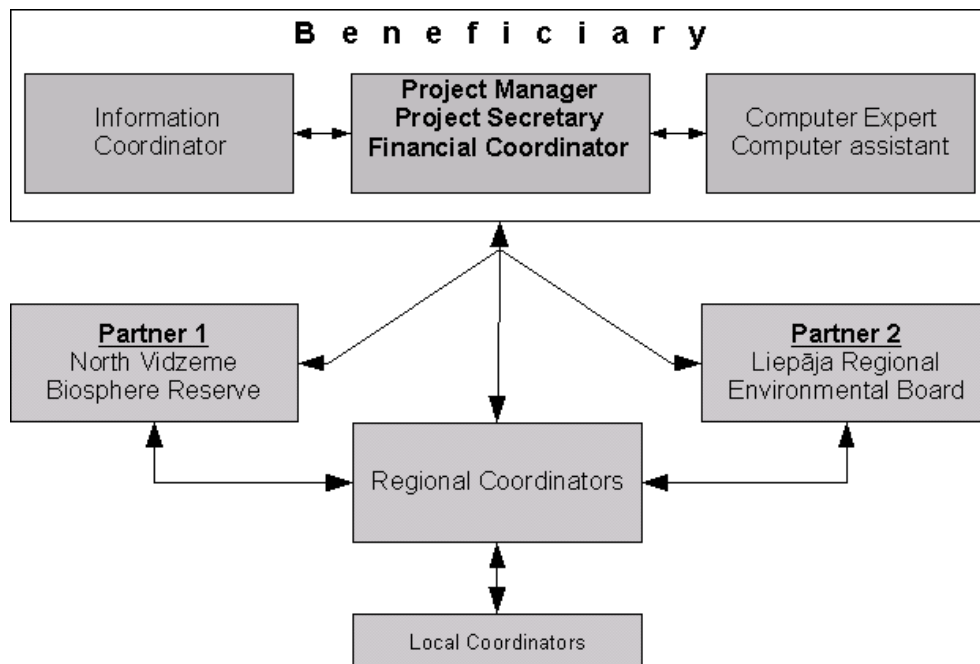


Fig. 3. Project administration.

Project team met regularly. Field trips and seminars to various project sites were organised with planners, municipalities, experts, for the exchange of experience, optimisation of works, evaluation of various solutions. Works were managed in coordination with experts, municipalities, state institutions (Fig.4).

Project team remained unchanged since year 2002, until the project end.

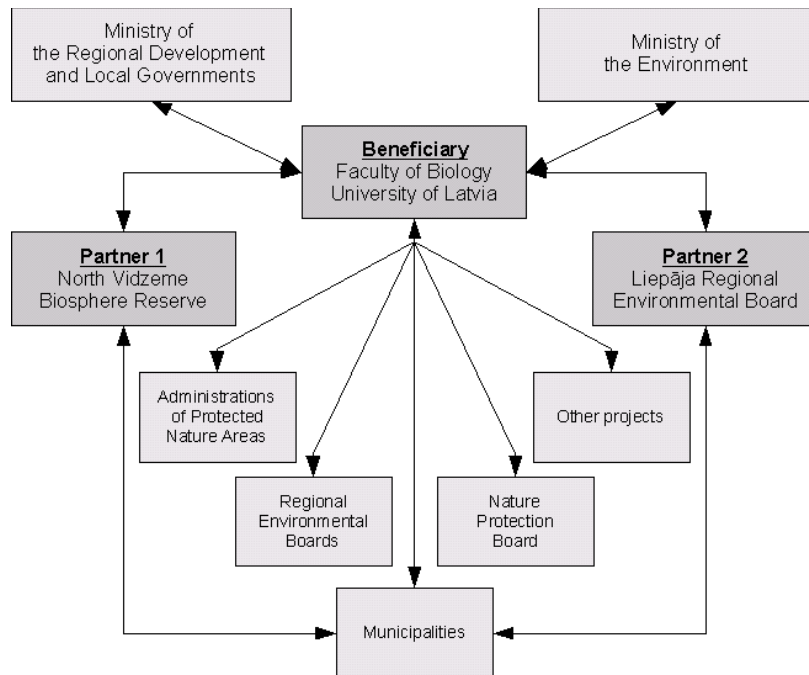


Fig.4. Project cooperation with other projects and institutions.

**Partners** coordinated the elaboration and implementation of management plans for Natura 2000 sites, cooperated with planners, analysed physical plans, organised local seminars, controlled the nature protection in local level.

Regional coordinators managed local coordinators. **Local and regional coordinators** cooperated with local municipalities, local people, architects, newspapers. They organised the practical habitat management projects and the building of small-scale infrastructure.

Following reports were sent:

Report	Date of sending	Covered period
First progress report without payment request	29th May 2003	1st April 2002 – 31 May 2003
Second progress report without payment request	2nd July 2004	1st June 2003 – 21 June 2004
Interim report with payment request	12th January 2005	1st April, 2002 – December 31, 2004
Third progress report without payment request	28th December 2005	January 1, 2005 – December 20, 2005

## Action F2. Independent audit of the project.

**Time plan:** October 2005 – June 2006.

The project audit was done by the certified Audit Company "J.Laša Auditoru Firma SIA" (united registration number 40003133767). The auditor verified the implementation of project,

eligibility of declared costs, declaration of project income, and origin of participant's financing. Auditor audited financial statements of the project and undertook the internal audit in addition to the audit planned in the project proposal. Auditor also visited and checked the small-scale infrastructure objects constructed, interviewed project participants. Auditor checked also the interim and progress reports.

**Additional information:** The audit statements please see together with Financial Report.

### **Action F3. Establishment of steering group and organisation of steering group meetings.**

**Time plan:** October 2002 – June 2006.

**Planned:** Steering group meetings.

**Results.** Steering group was established in December, 2002. Since that, 11 meetings were organised.

Members of the group represented following institutions and NGO's: Ministry of the Environment; Ministry of the Regional Development and Local Governments; Nature Protection Board, the Joint Stock Company "Latvian State Forests"; Environmental State Office; four Regional Environmental boards, Latvian Union of Municipalities, and Environmental Protection Club (2 branches). Minutes of the meetings are available upon request.

In steering group meetings, the progress of the project was reported. Various aspects of project activities were discussed and the success of actions was evaluated. At the same time, the communication between various institutions concerning the aims of the project was facilitated.

One meeting was organised in project sites – group visited objects in Jūrmala and Lapmežciems, met local coordinators.

These meetings were very useful because of exchange of valuable information and also because of the possibility regularly inform ministries and regional environmental boards on the actual problems of the coastal protection.

### **Action F4. Monitoring the effect of the management measures on habitats and species.**

**Time plan:** April 2003 – June 2006.

**Planned:** monitoring of habitats – before and after the practical actions.

**Results.** All monitoring works which were began in year 2003, were continued until year 2006. In total, 23 sites were monitored.

In every site, following parameters were recorded: coordinates; area; habitats; vegetation; level of human pressure. Photos were taken. Vegetation was described according to method of Braun – Blanquet. Size of sample plots: 1x1 or 4x4 metres in open dunes and grasslands, 10x10 metres in forests.

**Additional information:** summary of monitoring results in Annex 9.

## 6. PROJECT EVALUATION AND CONCLUSIONS

### 6.1. The process

In general the project was implemented according to the foreseen plan and the project objectives have been achieved. To a large extent this has been done thanks to immense efforts to overcome the obstacles created by significantly changing legislation and variations of the technical requirements issued by different state institutions and municipalities to implement the planned activities.

### 6.2. The project management

The project was managed in cooperation with beneficiary, 2 partners, and local coordinators in 12 municipalities.

**Partners.** Liepāja Regional Environmental Board did large work in organising, cooperation with landowners, private meetings, public discussions. North Vidzeme Biosphere Reserve was very successful in public awareness activities, involvement of regional TV, newspapers, inspectors, cooperation with municipalities on physical planning. Organisation of all actions was larger because of unplanned consultations and works with landowners etc.

**Local and regional coordinators** managed the practical works on sites.

The project management was rather difficult because:

- the large and complex project area (496 km long coastal belt, 24 municipalities, more than 6 000 landowners);
- changes of legislation. During the project time, the “Law on the Protected Belts” was revised 2 times, the “Law on the physical planning” was revised 4 times, and also the regulations on the elaboration of management plans for protected nature areas were changed. At the same time, there are various opinions in the interpretation and implementation on the legal acts. The interpretation of legal acts differed between the municipalities, between various institutions. Also the Public procurement was changed.
- issues of coastal protection and management were included in politics – because state authorities often were involved in conflicts of interests concerning the use of particular coastal areas.

### 6.3. Success and failures

#### Successes

1. **Habitat map, functional zoning** (actions A2, A3) are being used in physical plans and detailed plans of the municipality, and they become the background of further integral coastal management, national planning and other measures.

At the same time, architects and physical planners were involved in a various manners and now they are satisfied with their improved knowledge about nature conservation issues, and are using this approach in other areas as well.

2. The demonstration projects in municipalities – building of **small-scale infrastructure** for visitors, actions E10 – E21 - were very successful because the concern and awareness of municipalities was raised. Municipalities, landowners see the possibility of coastal management while protecting it, and continue the management of the sites in other projects.

The raised capacity of municipalities and state institutions for such demonstration projects (small-scale tourism infrastructure for habitat management) is very important.

Visitors use the constructions built by the LIFE project. Nothing is significantly vandalised, vegetation is being recovering. People are satisfied with the infrastructure and they also say that now they start to see the value of these habitats (before the project, many people treated the dunes just like the barrier to the sea but now they appraise the diversity and beauty of wooded, grey dunes etc. very high).

3. The **recovery of habitats** is ongoing in all project sites, but especially in coastal meadows.

4. The positive **attitude of general public** to the necessity of the nature protection and Natura 2000 sites has changed significantly.

5. The **protection of habitats** of Community importance is ensured **in all the project area**:

- in four Natura 2000 sites – management plans and/or Regulations “On Individual Protection and Use”;

- outside of Natura 2000 sites – network of microreserves; functional zoning integrated in physical plans of municipalities;

6. The public involvement and interest in the protection of coastal nature has risen very much during the project time.

## Failures

1. We met constraints while realising Action C1 - restoration of grey dunes by cutting trees and shrubs in the coastal protection belt between Ziemeupe and Pāvilosta. It was planned to remove also pines which were planted 30 – 40 years ago. However, we had to modify this action for the removal of invasive shrub species (similar as action A4) (ENV.D.1/RS/nb D(2004) 513813).

2. We lost 2 cofinanciers – municipalities where obstacles for the project implementation occurred because of the local conflicts of interests (preferring short – term economical benefit ignoring nature protection). (Modifications were accepted by the Commission on 8 December 2005.)

3. Parts of some habitat management measures were unsuccessful because of the weather and climate conditions.

- The fence for cows (Action D1) was partly destroyed during the storm of January 2005; it was restored but bowed slightly inland. We conclude that mowing would be more cost-efficient management for this area that is exposed to the risk of flooding during heavily storms.

(These constraints were met, and the project outcomes were not influenced.)

4. The management of grasslands by grazing turned very difficult because of the fragmented and small land properties in areas of grasslands. Much effort was necessary to agree with landowners, and often it was unsuccessful.

Due to excessive rise of prices, the fence in Vakarbuļi was not built (Action C3).

We conclude that in areas where the land is owned by several landowners the mowing is the most efficient solution for grassland management.

5. We did not succeed in the removal of illegal buildings in Piejūra Nature Park (Action C2) because the owner appealed the decision in the Administrative Court and the final decision is still in a process.

#### **6.4. Comparison against the project objectives**

Project objectives were:

1. To ensure the conservation of 23 habitat types (7 of them EU priority) and 4 plant species listed in Habitats Directive, 9 habitat types according to the Bern Convention, and 16 species listed in Birds Directive.
2. To develop the basic framework for the sustainable management of the coastal protection belt of the Baltic Sea in Latvia.
3. To promote the network of protected nature areas and microreserves of the Baltic Sea coast.
4. To raise the public awareness regarding the need for protection of habitats of Community importance.

Objectives have been reached.

1. The conservation of habitats and species of Community importance was reached by:
  - direct management (mowing and grazing, cutting of shrubs and invasive species etc.);
  - means of visitor management (network of small-scale visitor infrastructure like pedestrian trails, stairs, resting sites, car parking sites etc, as demonstration projects in 12 municipalities);
  - means of planning (management plans for 4 Natura 2000 sites, microreserves, integration of functional zoning into physical plans of 24 municipalities);
  - rising of public awareness.
2. Basic framework for sustainable management was developed in area of 32 000 hectares.
3. Network of protected nature areas and microreserves was promoted – elaborated management plans for 4 Natura 2000 sites, the implementation of management plans is ongoing, 198 microreserves in area of 987 hectares proposed (65 microreserves already approved).
4. Large work was organised for the rising of public awareness – demonstration projects in 12 municipalities, 2 films, 12 seminars, 7 booklets, 20 leaflets, cooperation with newspapers, radio, TV etc. These measures can be considered as very successful.

#### **6.5. Environmental benefits**

**Environmental benefits** - effect on conservation of species and habitats

The environmental benefits can be evaluated:

1. Directly (mowing and grazing of grasslands, cutting of shrubs, removal of invasive species).

2. Indirectly - construction of boardwalks, stairs, barriers, resting sites etc. encourage the restoration of habitat).
3. Indirectly, in level of planning - by securing the favourable protection regime for habitats and species of Community importance in broader scale (functional zoning, microreserves, **management plans for Natura 2000 sites**).
4. Indirectly, by rising of public awareness.

### 1. Direct habitat management

In all sites of direct habitat management, the measures can be considered as successful. The representativity of habitats of Community importance was increased, typical species structure of habitat recovered, abundance of typical species increased, abundance and vitality of invasive species decreased.

1.1. Boreal Baltic **coastal meadows** (1630\*) were managed by mowing, grazing (actions C3, D1) and cutting of shrubs (action C3). Management is considered as successful because the abundance of indicatorspecies of seminatural grasslands as well the abundance of rare and protected species (including *Angelica palustris*, species of Community importance) had increased. At the same time, abundance and vitality of reeds and shrubs has decreased.

1.2. **Embryonic shifting dunes** (2110) and **white shifting dunes** along the shoreline with *Ammophila arenaria* (2120) were managed by dune strengthening (actions C5, C6, E12), restoration of embryonic dunes (C6), and establishment of small-scale infrastructure for visitors (E10, E12, E13, E14, E15, E16, E17, E19, E20). In all sites, management was successful.

Dune strengthenings were not damaged by storms. The structure, dynamics and vegetation of embryonic dunes was recovered. In sites, where boardwalks were established, area of bare sand is decreased and vegetation (typical species) is recovering up to the sides of boardwalks.

1.3. **Grey dunes** (fixed coastal dunes with herbaceous vegetation) (2130\*) were managed by cutting of invasive shrubs (actions C1, C4) and building of small-scale infrastructure (actions E10, E13, E15, E16, E17, E18, E19, E20). Management was successful. The abundance, density and vitality of *Rosa rugosa* were decreased. In sites where small-scale infrastructure was established, vegetation is recovering, bare send is being occupied by species typical for grey dunes.

1.4. **Wooded dunes** of the Atlantic, Continental and Boreal region (2180) and **boreal forests** (western taiga) (9010\*) were managed by dune strengthening (action C8), cutting f invasive shrub species (C8), establishment of small-scale infrastructure for visitors (actions E12, E14, E16, E17, E18, E21).

Management was successful. Strengthenings have overgrown with typical forest vegetation. Vitality, density and height of invasive shrubs were decreased. People use boardwalks, and number of visitors has increased. Typical pine forest vegetation is recovering up to the sides of boardwalks.

**Additional information.** More detailed overview of monitoring results is attached in Annex 9.

### 2. Habitat management by building small-scale infrastructure for visitors

Small scale infrastructure for visitors (boardwalks, resting site, benches etc.) was built by our project in 16 sites (12 municipalities). Constructions were built in sites where habitats of Community importance are threatened because of visitor activities. Habitats of Community importance – grey dunes, white dunes, wooded dunes, boreal forest, coastal grasslands.



In general, the vegetation in managed sites is recovering, and the area of bare soil is decreasing. Species typical for natural habitats are colonising bare sands. The biodiversity value of habitats is increasing, in large area around the infrastructure.

The recovery of vegetation is faster in wet habitats than in dry habitats.

### **3. Planning (functional zoning, microreserves, management plans for Natura 2000)**

**Habitat and functional zoning maps** covering area of appr. 32 000 hectares were developed. Here, 19 000 hectares are covered with habitats of Community importance. The results of mapping were used for the complex approach for the protection of habitats of Community importance in whole project site.

**Habitat maps** (Action A.2.) are a significant contribution to the sustainable development of the coastal municipalities. This is unique to the LIFE-Nature fund because such a project could hardly be financed by state or by municipalities.

To ensure the favourable protection status for habitats of Community importance outside of Natura 2000 sites, 198 **microreserves** were proposed, 65 are already approved (mainly for the priority protected habitats like 2130\*, 1630\*, 9010\*).

To ensure the protection of other habitats of Community importance it was reached that habitat maps are being integrated into the **physical plans** of coastal municipalities.

For the appropriate protection of habitats in protected nature areas, **management plans** of 4 Natura 2000 sites were elaborated. Besides, following to the project recommendations to include additional habitats of Community importance, the area of 2 Natura 2000 sites: Užava Nature Reserve and Bernāti Nature Park was enlarged.

The effect of planning on species and habitats can not be measured directly but it is the background of the long-lasting **sustainable development** in project area.

### **4. Rising of public awareness**

The overall awareness of the landowners and the municipalities of the coastal development have been raised during the project implementation, which is one of the main results of the project activities.

1. Municipalities and landowners are learning through their management experience and finding the necessity of nature protection with means of habitat management including the management of visitor behaviour and establishment of small-scale infrastructure for visitors. For the protection of coastal habitats of Community importance, specific approach and solutions are necessary. Such experience previously was lacking in Latvia. In many municipalities, people conclude that only now (when constructions have been built) they understand the necessity of management of visitors behaviour due to the nature protection requirements.

2. Awareness has been raised directly by means of booklets, leaflets, and services for visitors. Residents and employees of the local administrations have gained understanding that balanced development of agriculture and tourism is one of the protection mechanisms of the Habitats of Community importance.

4. The awareness on the coastal nature of residents is raised by the possibility to visit coastal habitats where services for visitors have been developed by LIFE project. Other municipalities have been encouraged to develop similar projects. In last years, the welfare of residents of Latvia has increased. As the result, they more and more are looking for the sites where they can

have a rest and at the same time learn about nature. Therefore, sites with established small-scale infrastructure including information boards become more and more popular.

5. By dissemination of booklets, organised seminars, publications in press, as well as produced habitat maps and proposed functional zoning, the system of physical planning in Latvia has been significantly influenced towards the protection of coastal Habitats of Community importance.

6. Through involvement in the Project activities land owners, architects, local farmers and specialists of different professions are gaining practical experience on the management of habitats of Community interests. The contracting of subcontractors has created new work places for local people.

## 6.6. Policy and legislation implications

### Implications - EC

1. Currently, there are various international recommendations in Latvia (HELCOM Convention, ICZM), concerning the integration of habitat protection in the physical planning process. However, the necessity of the incorporation of these regulations in the national legislation should be stressed by EC. Otherwise, sometimes these recommendations don't work in the case of the conflict of interests.

2. The role of planning into the habitat protection should be increased, and EC should increase the importance of the planning as an instrument for enhancing nature protection.

### Implications - Latvia

1. The understanding and competency of environmental experts, which are working in the regions, must be raised.

2. The control on the nature protection is insufficient. Due to the lack of finances, there are only a few environmental inspectors working at the coastal area.

3. There is a high demand for research results on the ecology of coastal species and habitats, and the implications on coastal protection and management. Larger investments in research are necessary.

## 6.7. Innovation, demonstration value

**Demonstration projects.** Building of **small-scale infrastructure for visitors**, actions E10 – E21 – was very successful in terms of the involvement of municipalities in a new manner of nature protection and management. The infrastructure was planned applying a comprehensive approach, and subsequent to the evaluation of habitats, their protection necessity and sensitivity. If possible, visitors were concentrated in the most resistant sites, while removing them from the most sensitive and valuable sites. This approach is rather new in Latvia.

In this process, the municipalities and state institutions learned the process of legal building of such constructions. For architects, this was a new experience, which is being widely distributed now (two technical designs participated won the national competition of architects).

After the finishing of our project actions, 12 municipalities continue the establishment of small-scale infrastructure, using the approach of our project.

**Bird watching tower** in Rīga. Usually, such towers are being built in remote areas. This tower is located in a vicinity of the city, and it is available for people in wheelchairs. This is the first such a tower built in Latvia and has been appreciated very high.

The use of detailed **habitat map** for the physical planning – in this process, both the municipalities and state institutions started to see the habitat maps as an obligate prerequisite for the successful planning.

## 6.8. Socio-economic effects

This project was also aimed towards the public welfare, education, recreation, and support to local economy.

**Projects of NGOs.** In 2002, we were the only project dealing with the protection of coastal habitats. In further years, other coastal projects were started also by NGOs Environmental Protection Club of Latvia and by “Delna” (Latvian branch of Transparency International). Their main tackled problems were: illegal building, driving in coastal habitats, conflicts of interests of municipalities, civil servants and politicians. Especially successful was the work of the Environmental Protection Club Pāvilosta branch. While struggling against the building and driving in coastal habitats in western coast of Latvia, they involved other NGOs and schools. In this cooperation, the LIFE project team helped with consultations, information and lectures, but in their turn they helped with the dissemination of information (booklets, leaflets, films).

**Integration.** Film “The green city” has been translated in Russian as well. Also in the competition for pupils (Quo vadis, the coast), both Russian and Latvian children participated together. It is important because of the exchange of various experiences in aspects of planning, habitat management and conservation.

The observation tower in Daugavgrīva and boardwalks in Medze are adapted for people with wheelchairs. It is an important demonstration project because in Latvia the movement for the ensuring of accessibility for handicapped people has started just now.

**Employment.** Large number of people were involved in project works. 13 local coordinators were educated on the organisation of habitat management works. Architects (enterprise “Komunālprojekts”) plan to continue the work in the designing the infrastructure of habitat management (only few specialists were working in this field before our project).

## 6.9. The future: sustainability, continuation, remaining threats

**The sustainability** of all project actions is ensured.

- Functional zoning and habitat maps are being integrated in physical plans of municipalities.
- Partly implemented technical designs are being implemented by municipalities, both with their own finances and applying for finances to various funds;
- Small-scale tourism infrastructure will be maintained by local municipalities. All constructions (including information boards) were legally committed to the municipalities or to Joint Stock Company “Latvian State Forests”. Now they are the owners and managers of them.
- Management plans are being integrated into physical plans of municipalities and also implemented in a scope of other projects.

- The continuation of grassland management is ensured according to various contracts.

### **Remaining threats**

In a scope of LIFE project, pilot and demonstration subprojects were implemented. All the threats mentioned in the project application were decreased significantly. However, they were not eliminated completely because the project area is very large and complex and because the socio-economic situation in the area is changing. Yet, time is needed as well.

Particular potential holdback to the sustainable development of the coastal protection belt in Latvia are:

- Privatisation of land properties. It is not threat itself. However, according to our experience, it is more difficult to ensure the habitat protection in newly-privatised lands because the main interest of the new landowners is to build their houses here.
- Involvement and understanding of municipalities on the nature protection issues is still not adequate. At the same time, the staff and the politicians in municipalities are changing. In some municipalities, few (5-7) deputies can decide on the development of large territories, and these decisions can be environmentally unsound, mainly because of conflicts of interests, deficiencies of legislation or wrong interpretation of the legislation which can result in the decrease of the area of habitats of Community importance.

### **6.10. Long term indicators of the project success**

Possible long-term indicators for the project success are:

- the public attitude towards Natura 2000 network is positive;
- area of habitats of Community importance under the favourable status of protection is not decreasing;
- habitat maps and functional zoning are being used for species and habitat monitoring and are being updated;
- the network of small-scale infrastructure built by our project is being used, maintained and enlarged.
- the area of mowing and grazing is being continued and enlarged.
- the area covered by invasive species is being controlled and decreased.
- the public education on the coastal habitats continues.

## 7. After-LIFE conservation plan

### 1. Habitat maps and functional zoning (Actions A2, A3)

This initiated by the project work will be continued in physical planning of the municipalities. Municipalities, regional environmental boards, ministries have received habitat maps and functional zoning. They are using these maps for the analysis of physical and detailed plans and in case of solving various conflicts. Experts, who mapped the particular areas, are participating in this work and will continue it in future.

The use of our maps for various levels physical plans is being required, monitored and supervised by state institutions (the Ministry of Environment, Ministry of Regional Development and Local Governments, Regional Environmental Boards). Maps were used by other LIFE-Nature projects in Latvia and LIFE-Environment project “Envifacilitate”.

### 2. Continuation of implementation of technical designs (Actions A6, C3, E10 – E21)

In most of the municipalities, the necessary management measures extended the finances of our project. Nevertheless, those activities were planned in technical designs (it did not increase the time and budget of the elaboration of technical design). Later, the priorities were decided, and only the most necessary constructions built by the LIFE project. Municipalities are interested to continue the implementation of the prepared technical designs, using their own finances or in the scope of other projects.

In Roja municipality (E17), municipality implemented the technical designs at the full extent and built additional small-scale infrastructure in year 2005.

In Užava (E13), Joint Stock Company “Latvian State Forests” built small-scale infrastructure which is integrated with our project constructions, in accordance to the management plan elaborated by our project.

In Pāvilosta, the municipality applied for the finances from Environmental Protection Fund of Latvia, and continued the implementation of the technical design in year 2006.

In Saulkrasti, municipality continued the building of pedestrian trails as recommended by our project, by it's own finances.

In Jūrmala, the municipality will continue the construction of the tower, using it's own finances, in accordance to the contract signed.

This continuation of implementation of technical projects shows that our demonstration projects have reached their aim. It is expected that all elaborated by the project technical designs will be implemented and thus additional benefits will be achieved and favourable conservation status for species and habitats will be promoted and ensured to a very large extent.

### 3. Maintenance of constructions built (Actions A6, C3, E1, E8, E10 – E21)

All the small-scale **infrastructure** (including information boards) was legally committed to the municipalities or (all constructions in Užava and 1 subsite in Carnikava) to Joint Stock Company “Latvian State Forests”. Now they are the owners and managers of all constructions build by the LIFE project. They are motivated to maintain these constructions because they have invested their finances as well.

Shelter for animals in Rīga (Action C3) will be maintained by Environmental Department of Rīga City Council, according to the contract.

### **3. Management plans for 4 Natura 2000 sites (Actions A7-A10)**

Three management plans (Piejūra Nature Park, Užava and Vidzeme Akmeņainā Jūrmala Nature Reserves) are already approved by the Minister of Environment, and for one more (Bernātu Nature Park), the approval is in process.

Additionally, the Regulations “On Individual Protection and Use” have been approved by the Cabinet of Ministers for 2 sites (Piejūra and Bernāti), and are in process for another 2 (Užava and Vidzemes Akmeņainā Jūrmala). This ensures the implementation of management plans and also the integration of management plans into physical plans of municipalities.

### **4. Management of coastal grasslands by mowing (Actions C2, D1)**

In North Vidzeme Biosphere Reserve (Salacgrīva), the mowing will be continued for the preparation of winter food (hay) for cattle.

In Rīga, the continuation of mowing will be organised in various projects. This year, Environmental Board of Rīga City Council applied and received the finances from Environmental Protection Fund of Rīga City Council, and the mowing was managed by Nature Protection Board. This cooperation will continue.

### **4. Management of grasslands by grazing (Action D1)**

Both in Rīga and Salacgrīva, the EU agri-environmental subsidies for grassland management will be used.

**In Rīga**, grassland management will be overseen by Environmental Protection Department of Rīga City Council. Grazing is being organised by Rīga Zoological Garden (subordinated institution to Rīga City Council). According to three-sided contract signed between the Rīga Zoological Garden, Rīga City Council and University of Latvia, the Zoological Garden owns the cattle and organises the grazing in this area. Zoological Garden will also organise applying for the agri-environmental subsidies.

**In Salacgrīva**, grassland management will be overseen by North Vidzeme Biosphere Reserve. The contract for the further management of grasslands was signed with farm “Z/S “Ķikupvēveri 1”” in Salacgrīva.

### **5. Ensuring adequate control (Actions D2, D3)**

For the control of nature protection in Piejūra Nature Park, the experience and capacity of local policemen and inspectors as well the Municipal Policy Board has raised. Policemen continue to control these areas but they take in account also the nature protection interests.

In North Vidzeme Biosphere Reserve, the control is being continued by the inspector. At the same time, the necessity for control is lesser here because of information boards and barriers built by our project.

### **6. Monitoring**

Partly, the monitoring data will be included in state monitoring programme of the coastal habitats. All monitoring results will be stored in Faculty of Biology, University of Latvia, which continue various research projects and therefore the results on permanent sample plots will be very useful for the further projects.

Monitoring results were delivered to Ķemeri National Park and are already being used.

## 8. Comments on financial report

**General comments on budget expenditures.** Total project costs were 1 666 151.60 EUR which is 75 % of the planned expenditures (Table 7). However, the aims of the project have been fully reached, and all actions except E7 (preparation and publishing of the book) have been implemented at the full extent.

Reasons on the [discrepancy](#).

Project budget was largely influenced by the insufficient prefinancing. The beneficiary could not ensure the prefinancing at full extent due to the following reasons:

1. Late confirmation of the project prolongation (asked on 13.01.2005, accepted on 14.12.2005). Therefore we had no legal documentation that would allow us to ask for the modification of the budget of the University of Latvia for year 2006.
2. University of Latvia is a state budget institution. According to the legislation of Latvia, it is not legally allowed for the state institution to loan the money. Also it is not allowed for the third party to lend finances for the state institution.

The project aims were reached thanks to the strict and constant control of finances realised by the financial coordinator as well due to professional and unselfish work of the project team.

Table 7. Summary table on expenditures

Budget category	A	C	D	E	F	Total	%
Personell	142 870.18	11 814.60	37 608.57	109 524.90	433 659.90	735 478.15	96%
Travel	10 165.09	0.00	9 324.34	22 163.08	14 235.47	55 887.98	52%
External assistance	46 145.70	96 514.24	12 362.66	412 655.22	0.00	567 677.82	78%
Durable goods	21 318.65	0.00	0.00		6 411.77	27 730.42	58%
Consumable materials	41 142.69	5 834.69	7 053.03	47 759.17	14 828.10	116 617.68	38%
Other costs	8 207.42	13.75	1 545.79	5 883.45	30 480.00	46 130.41	40%
Overheads						116 629.14	78%
<b>Total</b>	269 849.73	114 177.28	67 894.39	597 985.82	499 091.25	1 666 151.60	
<b>% of planned</b>	78%	78%	54%	61%	80%	75%	

### Comments on budget categories.

**Personell.** 96 % of the planned finances have been spent. Personnel expenditures were slightly exceeded in A and C actions. In A actions, large work of various experts was needed. The success of many further actions largely depended on the quality of A actions. In C actions, there were many small-scale works in sites (for example, cutting of shrubs and invasive species, strengthening of dunes). Here the hiring of individual workers was advantageous.

**Travel.** 52 % of the planned costs have been spent. It was possible to save finances of this category because many workers and local coordinators were local residents in the project sites. Therefore the travel expenditures were lower than expected.

Travel costs were saved because of the strict control of finances. Due to insufficient cofinancing, we used also the personal transport.

**External assistance.** 78 % of the planned have been spent. Reasons for the savings are:

1. Organizing the price quotations we tried to find out the most cost-efficient solutions (we repeated them when considered it was necessary).
2. Instead of external assistance contracts individual contracts where signed when it was cost-efficient.

**Durable goods.** 58 % of the planned have been spent. Savings were attained for the purchase of computer programmes. If possible, software with discounts available for universities was used. Some software were replaced with alternative Open Source software. For several programs, there was no necessity to buy because they were already purchased by the University of Latvia at the time being.

**Consumable materials.** 38 % of the planned have been spent.

Large savings were attained under the external assistance category. For the building of small-scale infrastructure, the purchase of materials was more profitable when purchased by enterprises themselves, in a scope of contracts of external assistance. At the same time, local materials were much cheaper (especially wood, gravel etc.) than if they would be purchased by a separate procurement procedure by the beneficiary and/or project partners.

**Other costs.** 40 % of the planned has been spent.

**Overheads.** 78 % of the planned costs have been spent.

### **Comments on action categories.**

**A actions.** 78 % of the planned finances have been spent. All actions were implemented at the full extent.

**C actions.** 78 % of the planned finances have been spent. All actions were implemented at the full extent.

**D actions.** 54 % have been spent. All actions were implemented at the full extent. We found the possibility to save on actions D2 and D3 – control in 2 protected nature areas. It was possible to perform this control cheaper than planned, at the same time achieving the aims of these actions.

**E actions.** 61 % have been spent. All actions except E7 were implemented at the full extent. We saved a lot under action E22 (participation in conferences) because we were invited speakers in many events, and therefore the participation was cheaper as part of the costs were covered by the organizers. The other type of savings was due to proper looking for the most cost-efficient solutions for the small-scale infrastructure building (price quotations).

Unfortunately, we did not implement the action E7 – preparation and publishing of book. Faced with the lack of finances at the final stage of the project, we decided to prioritise the actions which were not completed as well the actions which where bound to the contracts with



municipalities and also which unrealisation would influence the success of other actions and the project itself significantly.

**F actions.** 80 % have been spent and all actions implemented at the full extent. Savings were attained in travel, durable goods, consumable materials and other costs categories.

## 9. List of Annexes attached to this report

Action	Nr of Annex	Name of Annex
A2, A3	1	Habitat map, functional zoning
A4	2	Contracts (with Salacgrīva municipality, Jūrmala City council, Rīga National Zoological Garden; contracts with partners).
All actions	3	CD disc with pictures of all project works
E2	4	All leaflets
E3	5	All booklets
E2, E3	6	Dissemination of booklets and leaflets
E5	7	2 films
E9	8	Layman's report
F4	9	Monitoring results
All actions	10	Map with Natura 2000 status of all the project sites
All actions	11	Publicity

## 10. List of Annexes delivered with previous reports

Action	Name of Annex	In which report was annexed	Nr of Annex
A1	Questionnaire for landowners	Second progress report	1
A1	Resume on the Interests of Landowners in Coastal Zone	Interim report	1.1
A1	The Copies of Questionnaires for Landowners	Interim report	1.2
A1	Results of the questionnaire of landowners	Third progress report	1
A2	Habitat maps, Engure	Second progress report	2
A2	Map of Coastal Habitats in Latvia (CD)	Interim report	2
A2	Map of Coastal Habitats in Nature Reserve "Ziemeļi"	Interim report	3
A3	Functional Zoning for Liepupe Municipality	Interim report	4
A3	Functional zoning - CD	Third progress report	2
A3	Functional zoning - printouts	Third progress report	3
A4	Functional zoning. Plans of protection measures (functional zoning) for habitats of Community importance in the coastal protection belt.	First progress report	3
A4	Copies of recently signed agreements and contracts (with shortened translation)	Third progress report	4
A6	Technical project, Saulkrasti	Second progress report	4
A6	Overview on Progress of Action A.6 The Preparation of Technical Project for Restoration and Management of Coastal Habitats of Community Importance	Interim report	5
A6	The technical project for resting site "Bākas stāvlaukums" at Pape (Rucava municipality)	Interim report	6
A6	Overview on progress of Action A6 The preparation of technical designs for restoration and management of coastal habitats of Community importance (Update to 20 <sup>th</sup> December, 2005)	Third progress report	5
A6, E10	The technical design of the facilities for visitors in Piejūra Nature Park in Riga	Third progress report	6
A6, E12	The technical design of the facilities for visitors in coastal area of Lapmežciema municipality in Kupskaļņu Nature Park and in the 14th	Third progress report	7

	Kilometre of the Talsi Road		
A6, E13	The detailed plan for coastal area of Medze municipality	Third progress report	8
A6, E13	The technical design of the facilities for visitors in coastal area of Medze municipality	Third progress report	9
A6, E14	The technical design of the facilities for visitors in coastal area of Pāvilosta municipality	Third progress report	10
A6, E16	The detailed plan for coastal area of Salacgrīva municipality in 2 volumes	Third progress report	11
A6, E16	The sketch design for resting sites in Zvejnieku Parks	Third progress report	12
A6, E16	The sketch design for small scale infrastructure in Zvejnieku Parks	Third progress report	13
A6, E16	The sketch design for boardwalks in wooded dunes at the beach of Salacgrīva Town.	Third progress report	14
A6, E16	The sketch design for nature educational path in wooded dunes at the beach of Salacgrīva Town	Third progress report	15
A6, E16	The technical design of the facilities for visitors in coastal area of Ainaži municipality	Third progress report	16
A6, E18	The sketch design for small scale infrastructure in Užava Nature Reserve	Third progress report	17
A6, E19	The technical design of the facilities for visitors in coastal area of Carnikava municipality in Mežciems	Third progress report	18
A6, E19	The technical design of the facilities for visitors in coastal area of Carnikava municipality in Lilaste	Third progress report	19
A6, E21	The technical design of observation tower for visitors in Ragakāpa Nature Park	Third progress report	20
A7	Recommendations of public	First progress report	Annex 2.
A7	Management plans for Piejūra Nature park	Second progress report	6
A7	Management Plan for Nature Park “Piejūra”	Interim report	7.1
A7	Management Measures of the Nature Park “Piejūra” Included at the Management Plan and Carried Out by the LIFE Project	Interim report	7.2
A8	Management plans for Užava Nature Reserve, Bernāti Nature Park	Second progress report	6
A8	Management Plan for Nature Reserve “Užava”	Interim report	8
A9	Management plan of Vidzemes Akmeņainā Jūrmala Nature Reserve	Second progress report	5
A9	Management Plan for Nature Reserve “Vidzemes akmeņainā jūrmala”	Interim report	9
A10	The Copy of Application Form for Establishment of Micro-reserve in Pāvilota Town	Interim report	10.1
A10	The Copy of the Order on the Establishment of Micro-reserve at Nīca Municipality	Interim report	10.2
A10	The Scheme of Micro-reserves, the Copies of Applications and the Order on Establishment of Micro-reserve at Nature Park “Bernāti”(Nīca Municipality)	Interim report	10.3
C3, E10	Management Site on Habitat Map at Nature Park “Piejūra” (Rīga Municipality) - Action C.3, E10	Interim report	12
E1	Sketch project on information signs and information boards	Second progress report	7
E2	Leaflet – Užava	Second progress report	8
	Layout of the Leaflets (CD)	Interim report	28

E2	4 leaflets	Third progress report	21
E3	Booklet – “Sustainable management of the sea coast in Latvia”	Second progress report	9
E3	Booklet – “Sustainable development of the coast”	Second progress report	10
E3	Booklet – “The sea is attacking, what to do”	Second progress report	11
	Booklets	Third progress report	22
E4	Annex 3. Seminars Action E4. Seminars for stakeholders.		
E5	Film “The green city”	Second progress report	12
E11	Management Site on Habitat Map at Kolkas Rags (Kolka Municipality) – Action E11	Interim report	18
E12	Management Site on Habitat Map at the Coast near Siliņupe (Lapmežciems Municipality) – Action E12	Interim report	19
E12	Management Site on Habitat Map at “14th Kilometer” at the Talsi – Tukums Road (Lapmežciems municipality) – Action E12	Interim report	20
E13	Management Site on Habitat Map at the Coast near Anna River (Medze municipality) – Action E13	Interim report	21
E14	Management Site on Habitat Map at Saulkrasti (Saulkrasti Municipality) – Action E14	Interim report	12
E15	Management Site on Habitat Map at Pāvilosta Municipality – Action E15	Interim report	23
E16	Management Site on Habitat Map at Ainaži Municipality – Action C6, E16	Interim report	13
E16	Management Site on Habitat Map at Zvejnieku Parks (Salacgrīva Municipality) – Action C6, E16	Interim report	14
E16	Management Site on Habitat Map at Salacgrīva (Salacgrīva Municipality) – Action C6, E16	Interim report	15
E16	Management Site on Habitat Map at Outlet of River Vitrupe (Salacgrīva Municipality) - Action C6, E16	Interim report	16
E17	Management Site on Habitat Map at Gipka (Roja Municipality) – Action E17	Interim report	23
E17	Management Site on Habitat Map at Roja (Roja municipality) – Action E17	Interim report	24
E18	Management Site on Habitat Map at Nature Reserve “Užava” (Užava Municipality) - Action E18	Interim report	25
E19	Management Site on Habitat Map at Nature Park “Piejūra” (Carnikava Municipality) – Action E19	Interim report	26
E20	Management Site on Habitat Map at Pape (Rucava Municipality) – Action E20	Interim report	27
E21	Management Site on Habitat Map at Nature Park “Raga Kāpa”(Jūrmala Municipality) – Action E21	Interim report	17
F1	Detailed Budget of Project Actions	Interim report	29
All	Press releases	First progress report	5
All	Press releases	Interim report	29
All	Press releases	Third progress report	24
All	Pictures of various works (in CD)	Second progress report	13
All	Pictures of various works (in CD)	Third progress report	23