



<http://www.darwin.gov.uk>



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## ***Darwin Initiative for the Survival of Species***

### ***Annual Report***

#### **1. Darwin Project Information**

Project Ref. Number	162/13/013
Project Title	Establishing biodiversity monitoring networks to inform Estonian coastal wetland management
Country	Estonia
UK Contractor	Earthwatch Institute (Europe) and University of Brighton
Partner Organisations	NGO Läänerannik, Silma Nature Reserve and Matsalu National Park, West Estonia
Darwin Grant Value	£177,765 (£75,433 in 2004/05)
Start/End dates	1/4/04 to 31/3/07
Reporting period (1 Apr 2004 to 31 Mar 2005) and report number (1,2,3..)	1 June 2004 to 31 Mar 2005, Report number 1
Project website	<a href="http://www.vormsi.ee/darwin">www.vormsi.ee/darwin</a>
Author(s), date	Dr Chris Joyce (University of Brighton), Elle Puurman (NGO Läänerannik, Estonia), Silvia Lotman (Project Outreach & Development Officer, Estonia), Dr Roger Mitchell & Nat Spring (Earthwatch Institute Europe, Oxford).

## **2. Project Background**

The field sites and associated activities for this project in west Estonia are focussed on three coastal wetlands: Vormsi island, Silma Nature Reserve and Matsalu National Park. Each of these three areas is of international importance for their biological diversity. All designated as an Important Bird Area (IBA) and registered on Estonia's Natura 2000 list; Matsalu is also a Ramsar site. The project aims to address the problems of insufficient information, co-ordination, and participation in monitoring the internationally important coastal wetlands of Estonia. The project will obtain the scientific data needed to inform management by identifying key ecosystem indicators for monitoring and comparing change in managed and neglected coastal wet grasslands, develop a network of monitoring stations, and disseminate information through stakeholder participation, the world wide web, and practical and scientific publications.

## **3. Project Purpose and Outputs**

The overarching project purpose is to establish a network of stakeholders and sites for coastal wetland monitoring to inform management plans and environmental policy to ensure sustainable use and monitoring of biodiversity in coastal wetlands in west Estonia and the Baltic States. In addition, the project will increase the capacity for wetland monitoring in Estonian institutions; improve understanding and awareness of wetland biodiversity issues in Estonia and other Baltic states; establish monitoring sites for long-term use by stakeholders beyond the life of the supported Darwin project; promote wetland management and monitoring within the Estonian Ministry of the Environment's development of agri-environmental policies; enhance the network of public and private sector stakeholders and facilitate information exchange; and train Estonian scientists in wetland monitoring skills (e.g. data acquisition/collation, reporting).

The outputs have not been changed over last year, but the proposed operational plan was modified. This was a consequence of the delayed start due to late confirmation of the grant such that the first key staff appointments were made in September-October 2004. The delay was discussed with the Darwin Secretariat and now the project is following the agreed timetable of project activities. In particular, considerable activity during winter 2004-5 enabled key project milestones for the first phase of the project to be achieved (e.g. web site launched, initial stakeholder workshop held).

## **4. Progress**

The project has made excellent progress that is consistent with the baseline timetable and logical framework. Three Earthwatch teams were in the field in Estonia in June-August 2004, giving an opportunity for Darwin project partners to plan the initial stages of the project and to install and test water monitoring equipment. A full-time Darwin Fellow (Silvia Lotman – project outreach and development officer) was appointed in Estonia in September 2004 and a research assistant (Maureen Berg) was appointed to work in the UK and Estonia in October 2004. Both appointments followed competitive application

and interview procedures. Since October, both appointees have worked together to collate information on wetland monitoring and management methods and practices in Estonia. Key people have been contacted and the stakeholder network has been initiated via meetings and email. Two UK staff visited project partners in Estonia for 4 days in November 2004 for workshop planning and to train Estonian partners in hydrological monitoring techniques. The visit also included field expeditions to proposed monitoring stations and field testing of monitoring procedures. The project website was developed by Estonian stakeholders and UK partners from November 2004 and was uploaded (in Estonian and English) in January 2005. Silvia Lotman (Estonian Darwin Fellow) attended the University of Brighton for two weeks in January 2005 for specific training on information management, GIS, and water level monitoring methods. Training topics included literature reviewing, information retrieval, database management, and applications of GIS. Field visits to research and monitoring initiatives at English wetlands were also undertaken to provide comparison with the Estonian resources. The first project workshop was hosted in Estonia in April 2005 (See Appendix 1). Representatives from all of the main Estonian wetland projects attended. Research into monitoring methods led to the purchase of the necessary hydrological and soil moisture equipment in March 2005, ready to be deployed in Estonia in the summer of 2005.

Key method development during this initial phase of the project have been related to research, training and planning. Complementary background research on wetland monitoring and ecosystem indicators has taken place in the UK and Estonia using libraries, key contacts (agencies and Universities), field visits, and the internet. Most field research took place in June-August 2004 utilising Earthwatch volunteers in support of Darwin project staff. The focus for this field research was upon refining provisional lists of ecosystem indicators and installing and testing water level monitoring equipment. Training has involved project staff exchange to allow the Estonian Darwin fellow to attend the University of Brighton, where teaching on information searching and data management, and the use of GIS, was given. Also, project staff from the UK and Estonia had practical field-based demonstrations on monitoring equipment in the UK and Estonia. Planning the project has proceeded through the use of emails interspersed with meetings in the UK and Estonia. The workshop (held in April 2005) included discussion sessions where stakeholders participated in setting the agenda for the future development of the project. Specialist input has been required related to the web site development, outreach leading up the first workshop and ecosystem indicators (especially birds), for which part-time and/or short-term appointments in Estonia have been made.

<i>Workplan for the next reporting year</i>		
<b>Date</b>	<b>Financial year:</b>	<b>Key milestones</b>
Throughout year	Apr-March 2005/6	Stakeholder network sustained by email, web site updates, meetings and site visits.
April 05		Workshop 1 hosted
Jun-Aug 05; then ongoing Jun-Aug 05		Monitoring stations set-up; monitoring data collected 3 Earthwatch research teams in the field.
Oct 05		Produce second 6-month report for Darwin.
Jan-Feb 06		Training on monitoring plans
March 06		Project team review meeting
March 06		3 draft monitoring plans produced.
Apr 06		Second year annual report submitted to Darwin.

## **5. Actions taken in response to previous reviews (if applicable)**

This is a first year report.

## **6. Partnerships**

The collaboration between UK and Estonian partners has been excellent and regular. The communication is mostly carried out by email, and there have also been three UK project team members' visits to Estonia and one Darwin Fellow visit to the UK. The workshop for Estonian biodiversity monitoring stakeholders was carried out from 6<sup>th</sup> to 8<sup>th</sup> April 2005. The workshop involved approximately 30 participants and helped to establish new links between UK and local experts (e.g. from Pärnu county authorities, Tartu Agricultural University, Estonian Ornithological Society) and gave a detailed introduction of the Darwin project to participants. During the year, new links with monitoring projects have been made, and these were strengthened during the workshop. These links include proposals to collaborate monitoring activities with EU Life projects and an Estonian coastal meadow monitoring programme. The workshop materials will be published on the project website and the network of participants will continue to communicate via an email discussion group.

## **7. Impact and Sustainability**

The profile of the project in Estonia is already high within naturally interested parties and individuals (e.g. conservation groups, nature reserve managers, academics) and the challenge will now be to extend this influence within other stakeholder groups who are probably less easy to engage (e.g. absentee land owners, local and national politicians and civil servants). The impact and profile of the project in west Estonia is particularly high, partly because of the Earthwatch field project that has been established in the region for the preceding three years. During the first year of the Darwin project, the Darwin Fellow Silvia Lotman was recruited, which has provided a crucial link between UK experts and new Estonian stakeholders. The Darwin Fellow has also been able to raise the profile within the whole of Estonia through frequent meetings and email communication. The uploaded project website will provide a focus for the project in Estonia and internationally and also gives an opportunity to publish materials on the web and promote the project activities. The workshop for stakeholders was organised and promoted via newsgroups and the environmental news agency *Greengate* in Estonia (one press release submitted). The information about the Darwin project is spreading through participants of the workshop, with all key projects represented. The Estonian media and Estonian Ministry of Environment were also informed about the workshop. The positive feedback from participants of the workshop as well as feedback from newsgroups and media is evidence that the interest in the project and planning of monitoring of Estonian coastal wetlands is growing.

The project exit strategy involves enhanced capacity for wetland monitoring within Estonia, and volunteer-support from Earthwatch to continue long-term monitoring at key sites. First year progress has moved the project forward in both respects. Training of Estonian staff, equipment purchase and testing, and a well-attended workshop have all laid the foundations for enhanced monitoring capacity, whilst plans for field research and monitoring during summer 2006 fully incorporates Earthwatch volunteers into the protocol. Initial indications are that volunteer numbers for the summer 2005 field season are good and that a full programme of field teams will run.

## **8. Post-project follow up activities**

Not applicable

## **9. Outputs, Outcomes and Dissemination**

The initial project implementation timetable has been followed and outputs are largely consistent with initial plans. Collation and review of past monitoring efforts, which was begun in October 2004, is not yet completed, due to the disparate characteristics of the stakeholders and patchy availability of information. However, the issue was discussed at the stakeholder workshop in Estonia in April 2005, and it was concluded that all key projects involved in wetland monitoring in Estonia are now part of the stakeholder network. Plans to establish at least 6 field plots at 3 nature reserves by August 2005 to

monitor wetlands in Estonia were scaled back due to the delayed start of the project. Instead, it was decided to field test three locations at two reserves and, if successful, roll out the rest of the field plots in summer 2006. Pilot testing showed that the methods were satisfactory and so the equipment has now been purchased from the grant to allow expansion of the field sites to go ahead.

Dissemination in the host country targeted wetland monitoring scientists and practitioners during this first year of the project. Activities included regular email contacts, face to face meetings, and the first project workshop, at which the Darwin project was introduced to approximately 30 key stakeholders from the target audience (including representatives from all the other main wetland monitoring projects in Estonia). The project will now seek to widen its target audience to include other stakeholders, such as land owners, farmers, and politicians. Dissemination also took place in Estonia during the Earthwatch field season in summer 2004, with members of the local communities at Vormsi, Silma, and Matsalu engaging with volunteers and scientists on a regular basis. It is intended that dissemination activities will continue after the project has ended via the partner organisations, the project web site (which will be maintained on the Vormsi island server), and through the continued presence of the Earthwatch-funded project in Estonia.

**Table 1. Project Outputs (According to Standard Output Measures)**

<b>Code No.</b>	<b>Quantity</b>	<b>Description</b>
4D & 4C	2	Training weeks for postgraduates
5	1	Estonian trained over 6 months
6A	30	Estonian stakeholders attending workshop
6B	1	Workshop in Estonia on coastal wetland monitoring
7	1	Type of training material used in Estonia (web site)
8	18	Weeks spent by UK project staff in Estonia
12A	1	Website with integrated database as focal point for wetland monitoring
14A	1	Workshop organised
15A	1	Local press release (Estonia)
		<b>Any Earthwatch press releases???</b>
22	3	Wetland monitoring field plots established (piloted)

**Table 2: Publications**

Type *	Detail	Publishers	Available from	Cost £
(e.g. journals, manual, CDs)	(title, author, year)	(name, city)	(e.g. contact address, website)	



knowledge base and funds. The timeliness of the project has been highlighted, with the development and implementation of agri-environment schemes in Estonia, and the requirement for monitoring of NATURA 2000 sites, both key factors currently influencing Estonian biodiversity conservation. New constraints have been identified, particularly absentee landowners who may hinder monitoring and wetland management at important Estonian sites. Future plans are therefore seeking to reach out to a wider range of stakeholders, including landowners and farmers, by using innovative activities. These may include open days at demonstration monitoring sites and the use of leaflets or calendars to promote wetland conservation and monitoring.



Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2004/2005

<b>Project summary</b>	<b>Measurable Indicators</b>	<b>Progress and Achievements April 2004-Mar 2005</b>	<b>Actions required/planned for next period</b>
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> <li>• The conservation of biological diversity,</li> <li>• The sustainable use of its components, and</li> <li>• The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>			
<p><b>Purpose</b></p> <p>A network of people and sites for coastal wetland monitoring established to inform Estonian (and Baltic) management plans and environmental policies</p> <p>Key ecosystem indicators identified for effective monitoring and comparing change in managed and neglected coastal wetlands</p> <p>Coastal wetlands conserved through sustainable use and informed management</p>	<p>Research findings and monitoring data shared amongst Estonian (WEABR) stakeholders</p> <p>Monitoring guidelines adopted in WEABR management plans</p> <p>Wetland monitoring database and information on key indicator species from field stations incorporated into website</p> <p>Attendance of Estonian stakeholders at workshops</p> <p>Management manual disseminated to extended network (Baltic stakeholders)</p> <p>Enhanced management on WEABR coastal wetlands</p>	<p>All data disseminated to WEABR stakeholders by January 2005</p> <p>Provisional lists of indicator species uploaded onto web site February 2005</p> <p>Approximately 30 Estonian stakeholders attended workshop 1</p>	<p>Some stakeholders difficult to reach. Future workshop(s) will also target such stakeholders, e.g. landowners, farmers, policy-makers</p>

<b>Outputs</b>			
People network and monitoring sites established and integrated for sustained monitoring programme	Monitoring equipment in place at 3 reserves; 3 monitoring plans produced Stakeholders contacted by email Vegetation data collated from 96+ quadrats annually Bird and small mammal species and activity recorded annually	Equipment installed and tested at 2 reserves Stakeholders contacted by email/meetings Vegetation data collated from 64 quadrats Bird species activity surveyed and data collated	Established equipment to be checked; remaining equipment to be installed Stakeholders to be updated and expanded via email, meetings, and demonstrations Remaining quadrats to be set up Birds and small mammals to be monitored
Effective practice for coastal wetland monitoring (including key biodiversity indicators) disseminated	Management manual produced 2 annual and 1 final report Website launched in year 1 2 workshops held	Background research on wetland monitoring/management ongoing Website launched 1 workshop held	Web site operation to be refined and additional information uploaded Sympathetic stakeholders are supportive, but additional workshop for other stakeholders to be considered
Biodiversity indicators for coastal wetland ecosystems identified	Scientific quality of output evaluated by peer-review of submitted papers	Draft of 1 paper produced as collaboration between Estonian and UK partners	Paper to be submitted for peer-reviewed journal