

# **PROTECTION OF *TRITURUS CRISTATUS* IN EASTERN BALTIC REGION**

**Project N° B4-3200/05/000070**



## **FIRST ACTIVITY REPORT WITHOUT PAYMENT REQUEST**

**Covering period  
01. June 2004 – 01. March 2005**

**Report compiled by:**  
Voldemar Rannap  
Estonian Ministry of Environment  
Narva road 7a  
Tallinn 15172  
Estonia  
1. April 2005



NORTH KARELIA REGIONAL  
ENVIRONMENT CENTRE



VEJLE AMT



HAANJA  
MUNICIPALITY



RÕUGE  
MUNICIPALITY



ESTONIAN MINISTRY  
OF ENVIRONMENT

# Table of contents

## 1. Introduction

1.1. Background to the project	2
1.2. Project objectives	4

## 2. Summary

2.1. Activities	5
2.1.1. Preparatory actions, management plans (category A)	5
2.1.2. Non-recurring biotope management (category C)	5
2.1.3. Recurring biotope management (category D)	6
2.1.4. Public awareness and dissemination of results. (category E)	6
2.1.5. Overall project operation (category F)	7

## 3. Activities

3.1. Preparatory actions and management plans (category A)	8
3.1.1. Evaluation of breeding ponds A1	8
3.1.2. Monitoring methods A2	8
3.1.3. Criteria for assessing the favourable conservation status of <i>Triturus cristatus</i> in the baltic region A3	9
3.1.4. Action plans A4	10
3.2. Non recurring management (category C)	11
3.2.1. Pond restoration/digging C1	11
3.3. Recurring management (category D)	14
3.3.1. Management agreements D1	14
3.3.2. Management of terrestrial habitats D2	15
3.4. Public awareness and dissemination of results (category E)	16
3.4.1. Educational-scientific workshops E1	16
3.4.2. Educational seminar E2	17
3.4.3. Study tours E3	17
3.4.4. Work camps for habitat restoration E4	17
3.4.5. Guided tours E5	17
3.4.6. Nature trail, camping sites E6	18
3.4.7. Folders, posters, infoboards and exhibition E7	18
3.4.8. Best Practice Guidelines E8	19
3.4.9. WEB-page E9	19
3.5. Overall project operation and monitoring (category F)	19
3.5.1. Project management and accountancy F1	19
3.5.2. Monitoring F2	21

# 1. Introduction

## 1.1. Background to the project

The Great Crested Newt *Triturus cristatus*, listed in Annex II and IV of the Habitats Directive (92/43/EEC), is a rare and threatened species in the Eastern Baltic Region (Finland, Estonia, Latvia and Lithuania).

*Triturus cristatus* is found in most of Europe, except South and South-West France, Iberia, the Balkan, Ireland and the Mediterranean islands. Finland and Estonia make up the northeastern region of the distribution range of *Triturus cristatus*.

Despite a widespread distribution, the species declined considerably during the latter part of the 20<sup>th</sup> century in all of Europe, primarily due to the loss of suitable habitats.

### Estonia

*Triturus cristatus* is a rare and threatened species in Estonia. *Triturus cristatus* presently occurs mainly in South and South-East Estonia. Only two localities are found in North-East Estonia. In the first half of the 20<sup>th</sup> century the species was found dispersedly all over the country.

By 2003, 14 localities out of approx. 55 have remained. The population has declined mainly due to a lack of suitable breeding ponds and destruction of meta-populations.

Inventories (carried out from 2000 to 2003) have indicated that spawning is not successful in many water bodies due to the lack of necessary conditions. This results in the ageing of populations. Without any habitat management *T. cristatus* would face extinction in Estonia in the next 10-15 years.

### Finland

*Triturus cristatus* occurs in Finland on the island of Åland and in Eastern Finland.

In the past, the knowledge concerning the distribution of *Triturus cristatus* on mainland Finland was very sparse. Most of these few populations that have been known to exist have disappeared by now. Due to loss of suitable habitats the number of breeding ponds is currently considerably smaller than a few decades ago. It is apparent that the numbers of *Triturus cristatus* are declining. As the number of suitable habitats decreased during the 20<sup>th</sup> century, it can be deduced that the presence of the species in Finland has reduced as well. Additional *Triturus cristatus* inventories initiated in 2002 have revealed several new *Triturus cristatus* populations in Northern Karelia. Nevertheless, *Triturus cristatus* remains an extremely rare species in Finland.

In North Karelia there are 4 sites with 21 clustered ponds in all containing *Triturus cristatus* populations (including Värtsilä / Piilolampi and Huurunlampi-Sammakkolampi Natura 2000 areas). Besides North Karelia there is one known locality in North Savonia: Pisanlampi-Ruoholampi ponds on Pisa-Kypäräinen Natura 2000 area, plus a man-made pond in South-East Finland.

Results from inventories show that *Triturus cristatus* populations on mainland Finland exist only in a few clustered localities. It has also become apparent that breeding is not successful in many water

bodies, thus putting the *Triturus cristatus* populations at risk of extinction. If the conditions remain the same, the 21<sup>st</sup> century may very well bring about the extinction of the species in Finland.

If no actions are taken, *Triturus cristatus* populations will diminish significantly and become more isolated. Had the additional inventories not been carried out in 2002-2003, the populations of *Triturus cristatus* in Finland would have been driven to extinction without anyone noticing.

#### Denmark

*Triturus cristatus* is a widespread species in Denmark. In the 1940's it used to be present in more than 10 000 of ponds, but has continuously declined in numbers since.

The localities of *Triturus cristatus* recorded in 1946 in Denmark were revisited during the period from 1976 to 1986. The results of the revision proved that the number of ponds with *Triturus cristatus* has declined – by 50% on the average over 40 years (from 1946 to 1976-86). This tendency has continued. The decline rate from 1980 to 2000 has been 50% per decade on the average.

Despite the decline, the population of *Triturus cristatus* is still widespread in Denmark and the species exists in about 5000 of ponds today. An estimated 80% of the Danish population lives in agricultural landscapes and 20% in semi-natural landscapes or in forest.

#### Latvia

*Triturus cristatus* is a rare and threatened species in Latvia. During the 20<sup>th</sup> century the number of localities of *Triturus cristatus* has declined. Nowadays the species is found at 21 sites situated dispersedly all over the country. Many of those sites have not been inspected after 1986; therefore it is very difficult to estimate the size of the population of *Triturus cristatus* in Latvia. There is a need to acquire monitoring skills in order to achieve a better overview of the population status.

#### Lithuania

*Triturus cristatus* is a threatened species in Lithuania. It is distributed locally and is rare in some regions. There are 50 known *Triturus cristatus* sites in Lithuania today, but the distribution of the species is not very well recorded due to a non-existent species monitoring programme and the monitoring methodology not being elaborated. There is also a need to acquire monitoring skills in order to get a better overview of the population status in Lithuania.

### **Size of the population target by the project:**

#### Estonia

In 2003, there are 14 sites of *Triturus cristatus* known in Estonia, with a total of 63 breeding ponds. The project involves 12 out of the 14 Estonian sites, which cover 86% of the species' distribution area and approx. 97% of the total known population of *Triturus cristatus* in Estonia. The majority of existing breeding ponds is present in those 12 sites (56 ponds = 89% of the total number of breeding ponds). It is very difficult to estimate the total number of adult individuals of *Triturus cristatus* in Estonia, because the main methods used for monitoring and inventories have been egg searching and dip netting of larvae.

## Finland

The project involves five sites of *Triturus cristatus* on mainland Finland with a total of 23 breeding ponds. The project involves all known mire and forest ponds, which cover 95% of the total population size of *Triturus cristatus* in Finland.

Many of the areas targeted by the project are isolated and will probably not survive in the long term without any action being taken.

## Denmark

The populations and areas chosen for this project are located in the border area of eastern and western Denmark (Jutland) and cover about 5% of the total Danish population. This 5% was selected from the entire population with the aim of the areas being as varied as possible in the name of sharing experiences with Finland and Estonia and in the name of disseminating the results in the rest of Denmark and the North-European Lowland.

## **1.2. Project objectives**

The main objective of the project is to ensure the favourable conservation status of *Triturus cristatus* in the Eastern Baltic Region and in Denmark:

\*To save the small and isolated populations of *Triturus cristatus* from extinction and to increase the total population size in the extreme north-eastern part of its distribution range (Estonia and Finland) in order to preserve the gene-fund of the species.

\*To secure the long-term viability of the populations of *Triturus cristatus* in the Eastern Baltic Region and in carefully selected demonstration areas with different pond landscapes in Denmark.

\*To restore the structure of meta-populations, which is needed for the preservation of the species.

\*To educate local inhabitants and involve them in species protection and habitat management activities.

Several other endangered amphibian species share the *Triturus cristatus*' living and spawning places. In Estonia, these include *Pelobates fuscus* and *Rana arvalis*, in Denmark *Hyla arborea*, *Pelobates fuscus* and *Rana arvalis* and in Finland *Rana arvalis* (all species are listed in the Annex IV of the Habitats Directive). Consequently, all the above-mentioned amphibian species will benefit from the restoration of the *Triturus cristatus*' habitats.

International co-operation between Estonian, Finnish, Danish, Latvian and Lithuanian experts, along with practical fieldwork, provides the conditions for establishing the following additional goals:

- 1) To elaborate the criteria for assessing the favourable conservation status of *Triturus cristatus* for the Boreal Region and for Denmark (an example of the central part of the distribution range);
- 2) To elaborate a common monitoring methodology for the Eastern Baltic Region and Denmark, which should be applicable in the rest of Europe;
- 3) To elaborate protection guidelines for the Eastern Baltic Region and Denmark, which will also be relevant for the rest of the Boreal Region as well as for the whole Baltic Sea area.

## **2. Summary**

### **2.1. Activities**

#### **2.1.1. Preparatory actions, management plans (category A)**

The form for pond inventory was worked out by Danish and Estonian experts. The evaluation of new and restored ponds was carried out in three different landscape types in Denmark by Estonian, Danish and Finnish experts. All together 105 ponds were examined and the pond forms were filled in for each examined pond.

Seven different monitoring methods (egg searching, dip netting of larvae, dip netting of adults, searching of adults with flashlight, using traps, using fences, searching of hiding juveniles) were discussed. Compiling a report where all the different methods are described and analysed have been started.

The meeting held in Tallinn in February 2005 discussed the first ideas about assessing the favourable conservation status of *Triturus cristatus*.

Compiling of Action Plans for Estonia, Finland and Vejle County have been started and the first draft of Action Plan for Finland has been made.

#### **2.1.2. Non-recurring biotope management (category C)**

In the summer of 2004 an inventory was carried out to determine the exact location of new ponds. Ponds for restoration were also selected. This inventory took place at 6 project sites (Otepää Nature Park, Hauka, Kõõru, Kiksova, Kasakova and Piusa) and was done in cooperation with Estonian and Danish experts. At the beginning of 2005, fieldwork started in Haanja Nature Park, Sadrametsa and Pähni.

In September-November 2004, 20 ponds were dug and restored: 9 in Otepää NP, 5 in Hauka, 2 in Kõõru, 1 in Kasakova, 2 in Kiksova, fish were removed from one breeding pond twice and reed was cut during the work camp in Piusa.

The planning of the restoration of existing ponds in Finland started during the fieldwork period of 2004.

During the study tours to Denmark in 2004 several sites were selected for planned pond restoration/digging.

### **2.1.3. Recurring biotope management (category D)**

In 2004, management activities took place in the Otepää and Haanja nature parks and in the Haanja and Rõuge rural municipalities. Altogether 85 contracts for the management of *Triturus cristatus* terrestrial habitats and 10 contracts for pond digging were concluded.

380 ha of *Triturus cristatus* terrestrial habitats were managed in Estonia in 2004.

The restored *Triturus cristatus* breeding ponds and their surroundings were also cleaned of brushwood, if needed. This was done by the excavating company and often by the landowners themselves.

The tractor was purchased in Estonia according to the legislation by public procurement.

In Finland this action will start in the year 2005 but the planning of this action began during the preparatory fieldwork in 2004.

In Denmark, the action will start in 2005 parallel with pond digging.

### **2.1.4. Public awareness and dissemination of results (category E)**

The first educational-scientific workshop will be organised in Haanja NP on 11-15 of June 2005. The workshops will include both a seminar with presentations from Estonian and foreign speakers, and fieldwork.

The first study tour was organised in the summer of 2004 to Denmark. In addition to six Danish experts also experts from Estonia (3) and Finland (1) took part in the study tour. The aims of the study tour were to participate in a pond inventory to evaluate ponds dug and restored 5-10 years ago (for each examined pond a pond form was filled in) and to take part in the guided tour for local people introducing the amphibians and invertebrates breeding and living in small water bodies.

In 2004 a work camp was carried out in the Piusa project area. This one-day work camp was targeted at landowners and nature conservation specialists of Põlva County. An amphibian expert gave an overview of the *Triturus cristatus* and project manager gave an overview of the LIFE project. The participants cut some shadowing trees in the surroundings of the pond and cleaned the pond from the reed.

In Võru County 2 guided tours for landowners, pupils and local people will be organised in May 2005 and the preparation is going already.

A poster on *Triturus cristatus* was published in 2004 to introduce the species and its protection. The English version of the folder "Protection of the Great Crested Newt" was compiled and printed in the beginning of 2005.

A leaflet on *Triturus cristatus* was prepared before negotiations with landowners began for presentation purposes of the species. All landowners contacted by project employees received this leaflet. The webpage is currently under construction.

### **2.1.5. Overall project operation (category F)**

The present project is implemented by the Estonian Ministry of Environment in compliance with the legislation of the Estonian Republic, LIFE Standard Provisions and the internal procedures of the Ministry of Environment. The project manager was appointed by the Secretary General.

The project's bookkeeping is part of the Ministry's bookkeeping.

Partner contracts are signed with Vejle County, North Karelian Regional Environmental Centre and Haanja and Rõuge rural municipalities.

Several meetings with partners, local governments and environmental department bodies and experts were carried on from spring 2004.

In addition to the larger meetings, running reunions with landowners and the staff of rural municipalities, nature parks and environmental departments took place while organising and conducting activities.

The project and *Triturus cristatus* were introduced in the press.

Monitoring-related activities began in 2004 and are connected to several project activities.

### **3. Activities**

#### **3.1. Preparatory actions and management plans (category A)**

##### **3.1.1. Evaluation of breeding ponds A1**

In the summer of 2004 the first phase of the evaluation of breeding ponds was carried out in Denmark. Before the inventory started a pond form was worked out by Danish and Estonian experts. The investigation form was discussed with experts from Finland. The form contains the description of different pond characteristics.

The evaluation of new and restored ponds was carried out in three different landscape types: in seminatural habitats, in mosaic landscape with extensive agriculture and on a territory with intensive agriculture, because those areas (except the area with intensive agriculture) are the reference areas for Finland and Estonia. Intensive agriculture is not a serious threat to *Triturus cristatus* in the Baltic States and Finland today. But agriculture is intensifying more and more in Estonia and the other Baltic States along with economic growth and it can escalate into a significant threat in the near future.

Pond evaluation provides new knowledge that helps to determine which water bodies *Triturus cristatus* prefers, what the key characteristics of those ponds are, how densely the water bodies should be situated, and which structure and type of ponds is characteristic of a viable meta-population.

In the summer of 2004, 105 ponds were examined and the pond forms were filled in for each examined pond. The evaluation was carried out in cooperation of the Danish, Estonian and Finnish experts.

The evaluation will be finished in 2005. The results will be analysed and evaluated by Danish experts in cooperation with Estonian and Finnish experts. Processing and analysing of field data, elaboration of maps and writing of report will be completed as planned, after finishing of the fieldwork in 2005.

##### **3.1.2. Monitoring methods A2**

The *Triturus cristatus* monitoring methods used in different countries were discussed for the first time and some of them were also compared in the field during the breeding pond inventory in Denmark in the summer of 2004.

In February 2005 a meeting on the elaboration of a common monitoring methodology was held in Tallinn. Experts from Estonia, Denmark, Finland and Lithuania took part in this meeting. A Latvian expert was invited but she unfortunately could not come and the results of the meeting were sent to her.

An expert from each country presented an overview of the monitoring methods used in his/her

country. All the different methods (egg searching, dip netting of larvae, dip netting of adults, searching of adults with flashlight, using traps, using fences, searching of hiding juveniles) were discussed. The advantages and disadvantages of each method were analysed.

It turned out that some methods are impossible to use in some countries because the circumstances are very different. For example, catching adult newts by fencing the ponds or looking for juveniles around the ponds is almost impossible to use in Finland, because the majority of ponds are situated in the forest where those methods will not give relevant results.

The next step is to compile a report where all the different methods will be described and analysed. Suggestions for using different methods in different countries will also be given.

The first draft of the report on common monitoring methodology will appear on the webpages of the Nordic Field Herpetological Forum and Amphibien Schutz in order to stimulate discussion and information exchange among herpetologists and nature conservationists from Nordic and Baltic countries as well as from other European countries.

The new knowledge about monitoring methods discussed during the study tour in 2004 was already used during fieldworks in Finland in 2004 (dip netting of larvae and searching of eggs).

The development of monitoring methodology is progressing according to schedule.

### **3.1.3. Criteria for assessing the favourable conservation status of *Triturus cristatus* in the Baltic region A3**

The meeting held in Tallinn in February 2005 discussed the first ideas about assessing the favourable conservation status of *Triturus cristatus*. The conservation status of a species shall be considered favourable when population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, the natural range of the species is neither being reduced nor is likely to be reduced in the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

It was discussed that the assessment of the favourable conservation status of the species cannot be based only on one characteristic, like the number of adults, but the decision has to be based on a number of characteristics, such as the number of suitable ponds, breeding success, rate of isolation, etc. This topic remains under discussion.

#### 3.1.4. Action plan A4

In Estonia, the preliminary work for compiling the Action Plan for *Triturus cristatus* started in 2004.

In the summer of 2004, fieldwork was carried out in Estonia for determining the structure of meta-populations. Fieldwork took place in six project areas: Otepää Nature Park, Hauka, Kõõru, Kiksova, Kasakova and Piusa. At the beginning of 2005 fieldwork started in Haanja Nature Park, Sadrametsa and Pähni.

In the course of the fieldwork the experts tried to determine the actions needed for the management of each *Triturus cristatus* site. They also tried to figure out the earlier structure of pond clusters and the extent of the ponds to be restored - in order to connect the isolated populations and restore former meta-populations.

The owners of those sites were contacted in the frame of the fieldwork and possible management was discussed with them as well.

The fieldwork will continue in the summer of 2005. Work similar to the activities described above will be carried out at the 5 other *Triturus cristatus* sites.

Fieldwork in Denmark started in 2004 and it will continue in 2005 (action A1). Collected data will constitute the basis for compiling the Action Plan for Vejle County.

The compilation of the AP in Estonia and in Denmark will start in the spring of 2005.

#### Finland

Because many of the sites in Finland have been found recently at the beginning of 2000, preparatory fieldwork was necessary when defining the level of populations, protection actions and management of action plans in the most effective way for each site. A significant amount of fieldwork connected actions A4 and F2, which cannot be separated in this preparatory period. This kind of preparatory actions were also essential in determining the most suitable natural habitat for *Triturus cristatus* in Finland. Preparatory fieldwork provided a lot of information needed for compiling the Action Plan. For example, it turned out that deciduous trees or primarily deciduous parts of forest around the ponds are preferred to spruce dominated forest. It also appears that reproduction efforts are scarce at sites where forest has been logged. During the preparatory fieldwork some new *Triturus cristatus* ponds were also found in the vicinity of already known sites with a variable number of individuals.

The preparation of an Action Plan has started after the fieldwork period including specific characterisation and actions allocation of each site respectively. The site description includes specific data with regard to spruce cutting and pond restoration for example. The evaluation of isolated populations and gene flow between single ponds and pond clusters at project sites and in localities is also discussed in the Action Plan. This aspect should be still covered in the future, guaranteeing long-term favourable conservation status and species survival.

The planning of restoration of existing ponds has started during the fieldwork period of 2004. This work is needed for actions C 1 (pond restoration) and D 2 (management of terrestrial habitats), but it

is also connected to action A 4 (action plan). The planning is included in site descriptions. These actions C 1 and D 2 will start during the fieldwork period of 2005, including the removal of brushwood and branches from water bodies. At some sites, restoration will also include deepening the ponds and removing mud and excessive plants. This planning is also included in site description plans. The plan of digging new ponds has not started yet because this action requires more cooperation with Danish and Estonian experts during the present year.

The first draft of the Action Plan for Finland is completed and will now be discussed with Estonian and Danish experts to be able to move on.

## **3.2. Non-recurring management (category C)**

### **3.2.1. Pond restoration digging C1**

Estonia

In the summer of 2004 an inventory was carried out to determine the exact location of each new pond. Ponds for restoration were also selected. This inventory took place at 6 project sites (Otepää Nature Park, Hauka, Kõõru, Kiksova, Kasakova and Piusa) and was done in cooperation with Estonian and Danish experts. At the beginning of 2005, fieldwork started in Haanja Nature Park, Sadrametsa and Pähni. The results of these inventories are presented in appendix 4.1.

When determining the locations for new ponds or ponds that needed some deepening or mud removal, the following aspects were taken into account: landscape relief, surface structure, the locations of previous water bodies that have grown over or disappeared in some other manner, the density of ponds, optimal distance between the ponds suitable for *Triturus cristatus*, the existence of the necessary foraging, shelter and hibernation areas.

The inventory also included negotiations with landowners, which resulted in the conclusion of preliminary agreements for pond creation. Meetings were held with construction advisors of rural municipalities in order to go over aspects concerning pond creation once again (the first meetings had taken place in the course of compiling the project). Thereafter the project representatives together with the landowners filled the application forms for pond creation and for acquiring the necessary permits from rural municipalities and the Otepää Nature Park administration. The employees of Otepää Nature Park and Võru County environmental departments participated throughout the whole process. Contracts were also concluded with landowners, stipulating the location of ponds and further requirements (fish must not be allowed into the ponds, the landowner shall not obstruct management activities, etc.).

In September-November 2004, 20 ponds were dug and restored:

Otepää NP: 3 new ponds were dug, 6 ponds were restored; Hauka project area: 2 new ponds were

dug and 3 restored; Kõõru: 2 ponds were restored; Kasakova: a new pond was dug; Kiksova: 1 pond was restored and 1 new pond dug; Piusa: fish were removed from one breeding pond twice and reed was cut during the work camp. The fish removal action was carried out together with the NGO "Wildlife Estonia", specialists from Tartu University and local environmental department employees.

Necessary preliminary work for digging another thirty ponds (determining locations, agreements with landowners, permits from rural municipalities) had been done, but the autumn rain had made the soil too soft and excavation equipment was in danger of getting stuck. The creation of breeding ponds in 2005 shall be initiated as soon as the conditions allow it.

Ponds were dug and restored with the help of a digging machine and a bulldozer under the supervision of the experts. Employees of the protected areas administrations and local environmental department as well as the landowners also participated.

Black soil was removed from the pond and taken far from the slopes of the pond. It is necessary to prevent the nutrients from running back into the pond when it rains. The soil was spread and flattened. In many cases bushes were cut down by landowners before digging began.

The attitude of landowners was very positive. As the landscape is hilly in the project area, numerous natural water bodies have always been found between the hills. In addition, landowners themselves have dug ponds over the last century and even before. They were used for soaking flax, as sauna ponds and often simply to enrich the landscape. The numerous water bodies made this region very suitable for *Triturus cristatus* and other amphibians. The social and economic changes that have taken place over the past decades have resulted in the destruction, overgrowth and trashing of ponds, which has decreased the numbers of amphibians drastically. As a result of the reckless and uncontrolled use of fertilisers during the Soviet times the rain washed the fertilisers along the hill slopes straight into the ponds, causing vegetation overgrowth and poisoning the amphibians. After Estonia had regained its independence and the economy had been restructured, rural areas and agriculture were the slowest to keep up. The young left and the old were unable to maintain their surroundings. Excessive nutrients and lack of management resulted in the disappearance of ponds, bringing about a dramatic decrease in the numbers of amphibians, including *Triturus cristatus*. Nevertheless, the developments taking place in the economy and the society were on the right track. Agriculture is getting stronger again and the whole region has become an important tourism and holiday area. The principles and attitude of people have thus changed and more and more dwellers have started to take care of their properties. This is where the wishes of landowners and nature protection activities find a common ground. While the ponds were being dug, several landowners came up to us asking about the possibilities to restore and dig ponds on their properties. The main reason for that interest was often improving the aesthetical appearance of landscape, which is particularly important in terms of tourism. The larger is the number of visitors, the greater is the desire

to maintain the local surroundings. For some farms, ponds are also an important water source in case of fire. As pond restoration is a rather expensive activity, landowners are often unable to undertake this job on their own. The creation of a couple of ponds might cost as much as several monthly salaries. As the project offers its help in this matter, people are very cooperative and helpful. The necessary preliminary work is often done beforehand by the farmers themselves if possible. The subsequent management of the surroundings of ponds can already be secured by the local people themselves.

The possibility to create ponds resulted in the somewhat unexpected positive attitude of landowners towards the Natura 2000 network. As the project activities take place in Natura areas, people were interested in how to join their properties into the Natura network.

The project experts suggested expanding the Natura area in the Hauka project area, as it is a very promising region, while being very important for *Triturus cristatus* as well. The landowner agreed and the corresponding application was submitted to the Ministry of Environment. The addition has been introduced into the List of Proposed Natura Sites and will be submitted to the European Commission. Preparing of letter to Commission to ask (enlarge) the changes concerning the project area in Hauka is in progress now.

#### Finland

The planning of the restoration of existing ponds started during the fieldwork period of 2004. Restoration will start in 2005, including the removal of brushwood and branches from water bodies. At some sites, restoration will also include deepening the ponds and removing mud and excessive plants.

Digging of new ponds has not started yet, because this action will require more cooperation with Danish and Estonian experts during the ongoing year. The process of drawing up the necessary permissions is in process now.

Spruces must be cut without heavy machines, employing a lumberjack for a period during the fieldwork period of 2005. The impact of cutting separate trees will cover an average area of 0.3 ha surrounding the ponds.

#### Denmark

According to the milestones, 2 of the 12 planned ponds should have been dug in 2004. It was decided to postpone this activity till 2005, because it was reconsidered as more efficient to dig all ponds during the same year. The transport costs will be in this case much lower. The delay will have no negative implications for the project.

During the study tours in 2004 several sites were selected for planned pond restoration/digging by Danish, Estonian and Finnish experts. This work will be continued in 2005 and according to this, agreements will be made with landowners.

### 3.3. Recurring management (category D)

#### 3.3.1. Management agreements D1

After the experts had determined the exact locations of the ponds during the inventory, the process of signing contracts with landowners started.

The first negotiations with landowners were held during the writing of the project proposal. In 2004, during the inventory and after, all the landowners were contacted again and their written agreements were secured before pond actions started. A total of 10 contracts were made with landowners for the restoration/digging of 20 ponds.

A contract was made with the landowners stipulating that they would not release fish into those ponds and would allow the necessary management on the slopes and in the surroundings of the ponds dug or restored in the frame of the LIFE-Nature project. The locations of the ponds are marked on maps and these maps also form a part of the contract.

Negotiations with landowners and the concluding of contracts for managing the great crested newt terrestrial habitats were carried out together with employees of Otepää NP, Haanja NP and local municipalities.

The areas to be managed were selected on the basis of two main criteria:

- 1) The management of the banks of *Triturus cristatus* breeding ponds and of the surrounding areas, which will prevent the ponds from growing over with brushwood and secure *Triturus cristatus* with foraging and migration conditions;
- 2) The management of breeding ponds situated far away from one another or of the areas separating these complexes, which will improve *Triturus cristatus* migration opportunities. During the period of 2005-2007, the old ponds will be restored and new ponds will be dug in-between such separately situated water bodies, thus creating passages for *Triturus cristatus* distribution. This should considerably increase the area of habitats suitable for *Triturus cristatus*, as well as the number of breeding ponds, securing elevated *Triturus cristatus* numbers. Single breeding ponds separated by a distance larger than a potential *Triturus cristatus* distribution area constitute a particularly endangering factor for the survival of *Triturus cristatus*. Even the smallest negative impact on the water body's breeding suitability results in the extinction of the given isolated population. The impact of inbreeding is also present in such generally quite small populations, consequently debilitating the population's gene-fund.

In 2004, altogether 85 contracts for the management of *Triturus cristatus* terrestrial habitats were concluded. The contract signing process will continue in the spring of 2005.

Finland

The planning of the restoration of existing ponds and their surroundings started during the fieldwork period of 2004. Restoration will begin in 2005, including the removal of brushwood and branches from water bodies. At some sites, restoration will also include deepening the ponds and removing mud and excessive plants.

The main private owner the company UPM-Kymmene has been contacted; the attitude is positive and the planning of management actions together with the company is in process

Denmark

Agreements with landowners concerning digging 2 ponds have been postponed till 2005 in order to be able to do all planned work during the same time. The delay will have no negative implications for the project.

During the study tours in 2004 several sites were selected for the planned pond restoration/digging by Danish, Estonian and Finnish experts, and negotiations with landowners have been held. This work will be continued in 2005 and according to this, agreements will be concluded with landowners.

### **3.3.2. Management of terrestrial habitats D2**

In 2004, management activities took place in the Otepää and Haanja nature parks and in the Haanja and Rõuge rural municipalities.

In order to secure the most effective management of *Triturus cristatus* terrestrial habitats, a tractor was purchased already at the end of 2004. The necessary mowing equipment will be purchased together with Rõuge rural municipality in the spring of 2005. Consequently it will be possible to employ the available equipment as soon as mowing becomes necessary and practicable.

The tractor was purchased according to the legislation by public procurement.

380 ha of *Triturus cristatus* terrestrial habitats were managed in Estonia in 2004 in accordance with concluded management contracts. The criteria employed in the selection of managed areas are described under action D1.

The restored *Triturus cristatus* breeding ponds and their surroundings were also cleaned of brushwood, if needed. This was done by the excavating company and often by the landowners themselves.

In Finland, the quality of terrestrial habitat for foraging, hibernation and migration plays an extremely significant role because of a long and cold winter and hibernation time requirement. This action will start in the year 2005 but the planning of this action began during the preparatory fieldwork in 2004.

In Denmark, the action will start in 2005 parallel with pond digging.

### 3.4. Public awareness and dissemination of results (category E)

#### 3.4.1. Educational-scientific workshops E1

The first educational-scientific workshop will be organised in Haanja NP on 11-15 of June 2005. The workshops will include both a seminar with presentations from Estonian and foreign speakers, and fieldwork aiming to provide the participants both practical experience and discussions concerning the threats to the species and possibilities to maintain and restore the habitats of *Triturus cristatus*. The participants will be given a chance to inventory various water bodies and compare their suitability for *Triturus cristatus*, *Pelobates fuscus* and other amphibians.

The programme of the workshop is the following:

Saturday, 11<sup>th</sup> of June

Arrival and nocturnal pond observation and testing of methods of *Triturus cristatus* and other amphibians in the ponds of Haanja Nature Park.

Sunday, 12<sup>th</sup> of June

Lectures:

LIFE-Nature project "Conservation of *Triturus cristatus* in Eastern-Baltic Region" team presentations (Riinu Rannap & Piret Pappel, Estonia; Lars Briggs & Lars Ch. Adrados, Denmark):

\*Status and conservation of *Triturus cristatus* and *Pelobates fuscus* in Estonia and conservation of *Triturus cristatus* in Finland

\*Results of 10 years of conservation of *Pelobates fuscus* in Denmark and the results of the LIFE inventory of restored and newly dug ponds in Denmark 2004

\*How to identify amphibian species by tadpoles?

\*How to use GPS in the field?

Fieldwork in different project areas and night transect counting of amphibians in Haanja NP

Monday, 13<sup>th</sup> of June

Lectures:

Ruslan Novitsky, Belarus: Results of *Bufo viridis* inventory in Estonia

Piret Pappel: Presentation on *Pelobates fuscus* in Piirisaare

Fieldwork in different project areas

Night transect counting of amphibians in and Haanja NP.

Tuesday, 14<sup>th</sup> of June

Fieldwork in different project areas

Conclusions

Wednesday, 15<sup>th</sup> of June

Departure

### **3.4.2. Educational seminar E2**

The preparing will start in 2005.

### **3.4.3. Study tours E3**

The first study tour was organised in the summer of 2004 to Denmark. In addition to six Danish experts also experts from Estonia (3) and Finland (1) took part in the study tour.

The aims of the study tour were:

1. To participate in a pond inventory to evaluate ponds dug and restored 5-10 years ago. It was necessary to examine how effective the colonisation of *Triturus cristatus* into those ponds had been and what effect these ponds have on the conservation of *Triturus cristatus*.

The inventory was carried out in three different landscape types: in seminatural habitats, in mosaic landscape with extensive agriculture and on a territory with intensive agriculture

For each examined pond a pond form was filled in.

2. Estonian and Finnish experts took part in the guided tour for local people introducing the amphibians and invertebrates breeding and living in small water bodies.

The 2005 study tour to Denmark will take place in the month of July.

### **3.4.4. Work camps for habitat restoration E4**

In 2004 a work camp was carried out in the Piusa project area. This one-day work camp was targeted at landowners and nature conservation specialists of Põlva County. Approx. 15 people took part.

The aim of this work camp was to introduce *Triturus cristatus* and its habitat demands and also to discuss the threats to the species and to do some management activities in the field.

A species expert gave an overview of the species and showed the eggs and adults of the species to the participants. Also an overview of LIFE project was given.

The participants cut some shadowing trees in the surroundings of the pond and cleaned the pond from the reed.

A work camp at Haanja is scheduled for 2005, and work is currently in progress with Haanja Nature Park administration.

### **3.4.5. Guided tours E5**

In Võru County 2 guided tours for landowners, pupils and local people will be organised in May 2005. One guided tour will be carried out in the Sadrametsa project area and another at Kõõru-Kiksova and

Kasakova.

An amphibian expert and an expert of water invertebrates have agreed to lead the tours.

In Põlva County at Hauka one guided tour will be organised in May 2005.

The dates of those guided tours will be advertised in the local newspaper.

Experiences for carrying out this kind of educational guided tours were gotten during the study tour to Denmark in 2004.

Relevant experts and local county environmental departments have agreed to conduct the guided tours.

#### **3.4.6. Nature trail, camping sites E6**

The creation of a nature trail in cooperation with local rural municipalities and Haanja NP will begin in 2005.

#### **3.4.7. Folders, posters, information boards and exhibition E7**

A poster on *Triturus cristatus* was published in 2004 to introduce the species and its protection. 4000 posters were printed.

This poster is a part of a series of posters, introducing the protected species of Estonia, called "Protected plants and animals of Estonia", first issued in 1996. This series is very popular in schools as an additional teaching material.

The poster is distributed to all Estonian schools, to the protected areas, nature schools and county environmental departments.

The English version of the folder "Protection of the Great Crested Newt" was compiled and printed in March 2005. The folder was prepared by Estonian, Danish and Finnish experts. The folder gives an overview of the distribution, life cycle, habitat demands, threats and preservation of *Triturus cristatus*; the LIFE project is described as well.

The number of folders is 1500. The translation to Estonian, Russian, Danish and Finnish languages is currently under way and these folders will be printed in April-May 2005. The English version is general. The other versions will give more specific information according to the peculiarities of different countries.

A leaflet on *Triturus cristatus* was prepared before negotiations with landowners began for presentation purposes of the species. All landowners contacted by project personnel received this leaflet. The leaflet will be re-printed in necessary quantities in the course of work.

### **3.4.8. Best Practice Guidelines E8**

Action will start later.

### **3.4.9. WEB-page E9**

The webpage is currently under construction. As the Estonian Ministry of Environment is updating its webpage design, we wish to follow the same design principle. The webpage will be completed in the spring of 2005.

Finland and Denmark

The basic text has also been compiled and is waiting for publishing.

## **3.5. Overall project operation and monitoring (category F)**

### **3.5.1. Project management and accountancy F1**

The present project is implemented by the Estonian Ministry of Environment in compliance with the legislation of the Estonian Republic, LIFE Standard Provisions and the internal procedures of the Ministry of Environment. The project manager was appointed by the Secretary General.

The project's bookkeeping is part of the Ministry's bookkeeping.

All contracts are signed by the project coordinator, the head of nature protection department and the Ministry's Secretary General.

Partner contracts are signed with Vejle County, North Karelian Regional Environmental Centre and Haanja and Rõuge rural municipalities.

As Haanja and Otepää nature parks are administered by the Ministry, it is not possible to sign contracts with them. They will be assigned tasks either directly by the project manager, through authorisation or with a ministerial directive according to specific needs and the nature of work.

Planning and preparing project activities began in the spring of 2004.

April, 2004

The project representation together with officials from the Ministry and species protection specialists from local environmental departments met with the landowners of Setumaa (Kõõru, Kasakova, Kiksova, Pähni, and Sadrametsa). The project, the great crested newt and the Natura network were introduced. After the meeting the participants drove through all the project areas in the region, additional discussions were held with landowners and activities for 2004 were planned.

May 2004

The project's kick-off meeting in Estonia. Participants included mayors of Haanja and Rõuge rural municipalities and members of rural municipality governments, heads and employees of nature parks, species protection specialists of environmental departments and representatives from the Ministry. The schedule included project discussion and planning future work, project management and coordination issues and other similar subjects. Meetings with landowners from Otepää and Hauka were held the following day.

June, 2004

Meetings with landowners and work on pond digging and land management.

September-October

Meetings with construction advisers of rural municipalities and nature park specialists; discussions on matters related to pond digging. Provision of necessary equipment.

November 2004

Meeting of the Estonian, Danish and Finnish partners and the Beneficiary. Budgetary issues, partner contracts, project management, etc.

December 2004

Meetings with the staff of nature parks, rural municipalities and environmental departments. Conclusions on land management, breeding pond restoration and other activities; formulating the results. The delivery of the tractor to Haanja Nature Park witnessed by rural municipality representatives.

January, 2005

Meetings with the staff of nature parks, rural municipalities and environmental departments. Planning activities for 2005.

February, 2005

Meeting of Estonian, Danish, Finnish and Lithuanian experts. The discussed subjects included the great crested newt monitoring methods, favourable conservation status, action plans, study tour to Denmark, workshop, as well as general management issues.

In addition to the larger meetings, running reunions with landowners and the staff of rural municipalities, nature parks and environmental departments took place while organising and conducting activities.

The project and *Triturus cristatus* were introduced in the press (magazine "Estonian Nature", national, county and rural municipality newspapers). The purchase of the tractor was emphasised. An article by the Estonian Minister of Environment in the national weekly "Maaleht" mentioned and introduced the present project as well.

In Finland, the project was introduced at a seminar on directive species and planning organised by the Finnish Ministry of Transport and Communications in September 2004 and in various county

newspapers. The seminar materials were published in the December 2004 issue of the magazine "Finnish Environment".

In Denmark, the project was introduced in regional radio stations and the study tour organised in the course of the project was discussed.

Meetings with local governments and environmental department bodies as well as negotiations with landowners took place in Finland and Denmark.

### **3.5.2 Monitoring F2**

Monitoring-related activities began in 2004 and are connected to several project activities, such as the evaluation of breeding ponds in Denmark, pond restoration and digging in Estonia, Finland and Denmark, study tour to Denmark and monitoring methods. Monitoring will continue in 2005 and the results along with relevant analyses will be submitted when the corresponding activities will have been completed and reports will have been prepared.