



Capacities and needs of nature conservation NGOs in the Nordic-Baltic region and their role in biodiversity monitoring

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Introduction



One of the activities a nature conservation NGO can deal with is participation in monitoring of threatened biodiversity.

Involvement of general public in biodiversity monitoring provides a significant input in obtaining data on population status of rare and threatened and also alien species in the country, because the number of professionals usually is not sufficient to cover all taxonomical groups or important processes in nature. And, what is more important, participation in biodiversity monitoring helps to raise awareness among wider public on nature values in the country.

Public biodiversity monitoring in the Baltic States is much less developed than in Sweden and experience exchange plays an important role in the project.

The main aim of the NCM Office in Latvia financed project “Nature conservation NGOs in the Nordic-Baltic region - working together” is improvement of co-operation among nature conservation NGOs in the Nordic-Baltic region and identification of role of nature conservation NGOs in public biodiversity monitoring. Two main activities were performed during the project the experience exchange workshop and the survey about the needs and capacities of nature conservation NGOs in the Nordic-Baltic region and their role in involving general public in biodiversity monitoring.

This publication gives an overview on the capacity and needs of nature conservation NGOs and situation in biodiversity monitoring for general public in the Baltic States.

About the workshop

The workshop ‘Involvement of general public in biodiversity monitoring: experience in the Nordic-Baltic region’ was held on October 24, 2009, in Riga, Latvia. The goal of the workshop was:

- to exchange best experience on the biodiversity monitoring for general public in the Nordic-Baltic region;
- to discuss particular organisational and methodological questions regarding biodiversity monitoring for general public.

There were 18 participants from Sweden, Latvia, Lithuania and Estonia representing nature conservation NGOs and state institutions. Workshop report is included in Annex II and the workshop presentations are available at the home page of Latvian Fund for Nature <http://www.ldf.lv>.

About the questionnaire

The questionnaire was prepared in English and translated in Latvian, Lithuanian, Estonian, if necessary, and disseminated among the target group NGOs, for which nature conservation was among the top priorities and which could be interested in biodiversity monitoring. In total about 55 questionnaires were distributed and 48 were returned in 2009. The survey was carried out nationwide, except of Sweden, where it was carried out in two provinces - Småland and Västergötland, however four national level NGOs were included in the survey as well.

The questionnaires were then analysed in each of the countries by project partner organisations. The questionnaire consisted of four sections: 1. Information about the organisation; 2. Interactions with other NGOs; 3. Expertise, needs and capacities of the organisation. 4. Experience in involving general public in biodiversity monitoring.

The next chapter summarizes results from this survey. The questionnaire form is included in Annex I.

The summary is based on 12 nature conservation NGOs replies from Latvia, six from Estonia, 15 from Lithuania, and 15 from Sweden.

Questionnaire Results and Interpretation



Latvia

General information about the organizations

Nature conservation NGOs in Latvia are quite new phenomena. Majority of nature conservation NGOs in Latvia are established in post soviet era, only two out of 12 are established in 1950ies and one NGO is established in 1985. The oldest nature conservation NGOs in Latvia are Latvian Entomological Society (1951) and Society of Botanists of Latvia (1952), which were established as societies of professionals and developed into NGOs after the soviet era. The survey encompassed two regional and ten national NGOs. There is a big range in number of members starting from nine up to 785 members and one nature conservation NGO does not have a membership at all as it has other type of organisation according to law in Latvia. Nature conservation NGOs, which have less than 60 members, dominated in the survey. It is common that one person is a member of several nature conservation NGOs in Latvia.

In general, nature conservation NGOs in Latvia are active. All, except one NGO, have implemented many projects. However, mainly short-time projects, lasting 3 – 12 month, had been implemented. Only four out of 12 (33%) NGOs have had projects longer than one year. More than 200 projects or campaigns have been implemented by the surveyed 12 NGOs in the post soviet era and the mean number of projects per one NGO regardless the duration is 26 projects. Two NGOs, of national level, publish their own journals at least annually. Majority of NGOs (75%) have their own home pages, but only half of them, of a national level, have it also in English.

The most common priority for the next three years among national level NGOs was species and habitat protection, but for regional level NGOs

particular regional and local activities, environmental education and co-operation with other NGOs and local municipalities were mentioned as top priorities for the next three years. Only two out of 12 mentioned monitoring as one of the priorities. Three NGOs did not identify any priorities at all for the next three years.

The NGOs, implementing the largest projects and the highest number of projects are those acting as entrepreneurs, having their own offices and employing staff.

Interactions with other NGOs

All nature conservation NGOs mentioned that they co-operate with other NGOs and half of the NGOs are members of a national NGO network. The most common way of co-operation in Latvia is to be a member of Environmental Advisory Board (*Vides Konsultatīvā padome*) where almost all national nature conservation and environmental NGOs are represented or preparation of common press releases on nature conservation issues. As far as we know, only Latvian Fund for Nature and Latvian Ornithological Society has signed the mutual agreement on co-operation. Six NGOs are members of at least one international network. CEEWEB, Planta Europa, EEB, Unita Malacologica, Ancient Tree Hunt (UK), FOEI, Eco Forum, AVAAZ, Earthday network, European Mycological Society and Birdlife International were international networks where Latvian NGOs are involved. Five NGOs (42 %) have launched international projects, however the maximum number per NGO was less than in Estonia and in Lithuania. Three main reasons for not launching international projects were mentioned: out of main organisational targets and lack of project management capacity and lack of human resources. One regional NGOs mentioned lack of foreign language skills as an obstacle.

Expertise, needs and capacities of organisation

All NGOs evaluated themselves high as experts in their main field, but majority feel less experienced at financial management and project development. Only one NGO mentioned 'No experience' for one out of five fields of expertise, namely for Financial management. One NGO mentioned the lack of high-qualified experts outside Riga as important factor.

Human resources and funding, as well as project management capacity were the most important needs mentioned by NGOs. 95% of NGOs mentioned applied nature conservation (inventories, species and habitat management etc.), education of general public and policy-lobbying as their area of expertise, which is obvious as they are common goals of nature conservation NGOs in Latvia. In our opinion, the main obstacles for expanding the nature conservation NGOs capacities in Latvia and international co-operation in terms of joint projects are the following:

- 1) Most of the international or EU grant schemes require substantial co-financing, which is not available for majority of volunteer-based NGOs in Latvia and very limited for enterprise-like NGOs. The membership fee, which usually is the only income, usually does not exceed 10 Ls per year.
- 2) The donation for nature conservation projects is not common in Latvia; however, there have been some good examples in the recent years.
- 3) There is a lack of persons among nature conservationists, who have good skills at project initiation, development and management and has time for activities in NGOs.

Experience in involving general public in biodiversity monitoring

Only 33 % (four out of 12) of nature conservation NGOs have experience in involving general public in biodiversity monitoring. They are national level NGOs for which monitoring is part of their regular activities and it had been carried out for more than three years. Two NGOs had less than 50 people involved annually, one 101-300 and one more than 300. Both members and non-members got involved. There is a high importance of government support, as all NGOs monitoring activities were at least partly sponsored by government and in one NGO it was even 100 % sponsored by government (Table 1). Only two NGOs had voluntary monitoring and only for one of them it was the main financial resource (75% of financial resources). Own funding was used in biodiversity monitoring by one NGOs and it made 30% of financial resources. It can be explained by the fact, that biodiversity monitoring in Latvia has been delegated to nature conservation NGOs to a great extent as they proved to be more efficient and professional than governmental organisations. All

four NGOs are also managing the monitoring process and, in general, all three types of feedback for participants, such as annual meetings, information in the home page and distribution of printed materials, are used. One NGO uses all three types of feedback.

The lack of financial resources was scored as the most important factor impeding the biodiversity monitoring in Latvia, except for one NGO. The monitoring objects of nature conservation NGOs are birds, plants, mollusks, invertebrates, mammals, as well as habitats.

The rest eight NGOs, which have not been implementing biodiversity monitoring so far, also expressed their interest in biodiversity monitoring, and plants (36%), birds (21%), fungi (14%), habitats (14%), mammals (7%) and invertebrates (7%) were chosen as most desired monitoring objects.

The main targets and complicity of biodiversity monitoring differ among the NGOs starting from rare species or habitat monitoring in particular localities up to statistically well planned countrywide monitoring.

In Latvia also governmental organisations, such as administration of North Vidzeme Biosphere Reserve, implements biodiversity monitoring for general public and the number of participants has increased from about 90 volunteers in 2005 to 400 in 2008. The monitoring was based on the parameters chosen by local people and includes bat, white stork, beaver, water quality, air quality, beetle, *Heracleum sosnowskyi*, tree alleys and other monitoring subjects. Experience exchange with colleagues from Latvia and Canada was important to implement the monitoring successfully. Methodology handbooks and informative materials were prepared and distributed among potential volunteers. The preparation of monitoring guidelines and handbooks was carried out in the ANO/UNDP project "Conservation of biological diversity in the North Vidzeme Biosphere Reserve", but the monitoring itself is 100 % voluntary. The monitoring supervisor, one person, is paid by the administration. The feedback is provided using the home page of the administration of North Vidzeme Biosphere Reserve and people are informed about this possibility via local and regional newspapers and in libraries.



Estonia

General information about the organizations

Like in Latvia and Lithuania, nature conservation NGOs mainly (66%) are of post soviet era. There is a big range in number of members starting from eight up to 600 members, median - 200 members. Nature conservation NGOs, which have 100 - 200 members dominated in the survey. One nature conservation NGO was without a membership. Although there are over 200 local environmental organizations, none of these is active in biodiversity monitoring in the context relevant for the current study. There are currently no active regional organizations in Estonia. The oldest nature conservation NGO in Estonia is Estonian Naturalist Society, established in 1853.

In general, nature conservation NGOs in Estonia are active. Mainly the organizations implement short-termed projects, three NGOs have longer-term projects concerning the monitoring of biodiversity and applied nature conservation (habitat management, preparation of management plans etc.). To sum up, five (80%) NGOs have had projects longer than one year. More than 170 projects or campaigns have been implemented by six NGOs in the post soviet era in Estonia and the median number of projects per NGO is 14 projects. The most common priority among national level NGOs was applied nature conservation (habitat management, preparation of management plans etc.) and environmental education. Two NGOs mentioned biodiversity monitoring as one of the priorities for the next three years.

The NGOs, implementing the largest projects and the highest number of projects are those acting as entrepreneurs, having own offices and employing staff like in Latvia and Lithuania.

Interactions with other NGOs

All nature conservation NGOs mentioned that they co-operate with other NGOs and more than a half of the NGOs (66%) are members of a national NGO network – Estonian Council of Environmental NGOs (EKO). EKO is the main body raising bigger national environmental issues.

IUCN, CEEWEB, and Birdlife International are international networks where NGOs get involved. Estonian nature conservation NGOs has a good international co-operation as five (84%) of NGOs have mentioned to have some international co-operation. The maximum number per NGO was 82 projects. Two main reasons for not launching international projects were mentioned: lack of project (and financial) management capacities and lack of human resources.

Expertise, needs and capacities of organisation

All NGOs evaluated themselves high as experts in applied nature conservation (habitat management, preparation of management plans etc.), and environmental education, which is their main field of expertise. Lack of project management capacity (incl. financial management skills) and lack of human resources were the most important and high scored needs mentioned by Estonian nature conservation NGOs. The needs do not correlate with number of members as some organizations have many activities, some have long history and traditions and quite big membership, but are not very active. Applied nature conservation (habitat management, preparation of management plans etc.) and monitoring of specific aspects of biodiversity (birds, plants, habitats etc.) were the most common fields of expertise.

In our opinion, the main obstacles for expanding the nature conservation NGOs capacities in Estonia is unpredictable and instable state funding for NGO-s, therefore few organizations are able to hire more or less permanent staff.

Experience in involving general public in biodiversity monitoring

66 % (4 out of 6) of nature conservation NGOs have experience in involving general public in biodiversity monitoring in Estonia. Half of them are national NGOs for which monitoring is part of their regular activities and it has been carried out for more than three years. In average 30 people (mediana) were involved annually and only members got involved in biodiversity monitoring. There is a high importance of government and international support, as all NGOs monitoring activities were at least partly sponsored by government and international donors (Table 1). Only for one NGO monitoring was mainly voluntary work. Own funding was used in biodiversity monitoring by 33 % NGOs.

Majority of NGOs participating in monitoring are also managing the monitoring process and regular meetings are the most common type of feedback. However, most of the NGOs do not have a long-

However, most of the NGOs do not have a long-term capacity (that means - stable, guaranteed resources) to manage the biodiversity monitoring process and this task has been overtaken by the governmental organizations. The main monitoring objects of nature conservation NGOs are habitats and communities, and birds. The one NGO (16,5%), which have not been implementing biodiversity monitoring so far, also expressed its

interest in biodiversity monitoring, and, in general, habitats (66%) and birds (50%) were chosen as the most desired monitoring objects.

The main targets and complicity of biodiversity monitoring differ among the NGOs starting from rare species or habitat monitoring in particular localities up to statistically well planned countrywide monitoring.



Lithuania

General information about the organizations

Like in Estonia and Latvia, nature conservation NGOs participating in survey in Lithuania are quite new. Majority of nature conservation NGOs (67%) participating in survey in Lithuania were established in post soviet era, five (33%) were established in 1960ies as societies uniting specialists in the specific areas, and three out of 15 were established in perestroika time, at the beginning of growth of environmental movements (in 1988, 1989 and 1991). The oldest nature conservation NGOs in Lithuania is established in 1965. The survey encompassed 67 % national level NGOs, 13% regional level and 20 % local level NGOs. 40% (six NGOs) are so called public enterprises. According to Lithuanian legislation they are not membership-based organizations, thus they do not have any members, and have from two to 14 employees, and are non-profit organizations. There is a big range in number of members in other nine NGOs, like in Latvia and Estonia, starting from 26 up to 500 members. The average is 83 members. Nature conservation NGOs, which have 26-500 members dominated in the survey. In general, nature conservation NGOs in Lithuania

are active, like in Estonia and Latvia. Unlike in Latvia and Estonia, there is a tendency to implement projects longer than one year, as 66% of the NGOs had projects of this category. In Lithuania, more than 115 projects or campaigns have been implemented by the surveyed 15 NGOs in the post soviet era and mean number of projects per NGO is eight. To sum up, the experts claim that, the NGOs, implementing the largest projects and the highest number of projects are those acting as entrepreneurs, having their own offices and employing staff.

The priorities of the organizations are very different and varied from general priorities of the organizations to concrete planned actions. Majority of the organizations had listed public education, raising its interest and level of knowledge of the public in specific areas of the biodiversity (birds, fish, invertebrates, etc.), as well as raising their general environmental consciousness. One organization had a goal to involve more public into amateur biodiversity monitoring activities. The other close priority was promotion of the environment-friendly economic activities (recreational angling, ecological farming and sustainable tourism). Some NGOs had listed more specific actions, such as preparation of publications, internet page, establishment of nature education school, organizing of environmental actions, registration of 100 objects of natural and cultural heritage etc. Organizations also aim at improving internal communication among their members and raising their level of expertise, as well as improving communication with public.

NGOs had also have goals concerning their management and financial sustainability, increasing level of cooperation with NGOs and other partners. This included answers from “to prepare and implement more projects”, “to provide more consulting services” to pessimistic “to survive”, “to ensure stability for employees”, “to remain independent form other groups of pressure, groups of opposite interests”.

Interactions with other NGOs

All nature conservation NGOs mentioned that they co-operate with other NGOs and six (40%) of the NGOs (66%) are members of national NGO networks. As a good example could be mentioned a Coalition of Environmental NGO's www.aplinkosauga.lt, that unites nine NGOs.

Three NGOs (20%) are members of international networks; all of them are national NGOs. More than half (53%) NGOs implement international projects and the maximum number of projects per one NGO is 20, average is three projects per one NGO. One local NGO was a partner in international project (LIFE-Nature), while others are national NGOs. The main reason for not launching international projects was lack of human resources. Only one local NGO mentioned that this is not their goal and that language barrier is an obstacle.

Expertise, needs and capacities of organisation

All NGOs evaluated themselves high as experts in their main fields of expertise, such as applied nature conservation, public education, consulting and policy-lobbying and public relations, which are in line with their major targets, but majority gave low scores for expertise in financial management. However, even this area was evaluated quite well.

Lack of project management capacity and lack of co-operation with other NGOs were the most important and high scored needs mentioned by Lithuanian nature conservation NGOs. Two NGOs named lack of expertise in their areas of activities as quite a big challenge. However, they provided explanations, that they meant lack of very narrow specialists (like lack of knowledge on bird disease, or lack of nature management knowledge). The average self-evaluation of the NGOs demonstrates that they consider themselves as enough experienced and competent to implement international projects.

In our opinion, the main obstacles for expanding the nature conservation NGOs capacities in Lithuania are the following:

1. Most of the international or EU grant schemes require substantial co-financing, which is not available neither for volunteer-based NGOs, nor for non-profit enterprise like NGOs in Lithuania. On the other hand, a mechanism on provision of the core funding for NGOs does not exist.
2. Lack of human resources is a problem, that is very much interlinked with the first one. Economic recession had also influenced NGO sector, when due to the lack of funding skillful NGO specialist had to look for other sources of living and had to reorient their activities to other sectors.

Experience in involving general public in biodiversity monitoring

Five (33%) of NGOs had experiences of public biodiversity monitoring. All of them are national level NGOs, all of them consider practical nature management and/or public education as their main area of expertise, and have confidence in their experience and expertise in the subject. In all cases public biodiversity monitoring was part of specific project or seasonal campaign. Only two (13%) NGOs called biodiversity monitoring as part of their regular activities, both these NGOs are specializing in ornithology. Four out of five cases (80%) NGO had involved less than 50 people annually and one case (20%) had involved from 50 to 100 people. Mainly members (68%) took part at monitoring.

The monitoring is mainly volunteer-based, however international funds play an important role in biodiversity monitoring (Table 1). In all cases, NGOs were providing their own financial resources as well. Unlike in Latvia and in Estonia, the level of governmental or other national funding is very low; nevertheless as a positive side should be mentioned active involvement of volunteers in activities.

Four NGOs are managing process of monitoring, and three of them implement this activity for more than three years and one did it for one year. One NGO uses only one type of feedback, one all three types of feedback for participants, such as annual meetings, information in the home page and distribution of printed materials, and another two types of feedback.

Lack of financial resources was mentioned as the main factor hindering the biodiversity monitoring for general public in Lithuania and management capacities were evaluated as the least problem. The monitoring objects of nature conservation NGOs are birds, plants, as well as habitats and communities.

The main targets and complicity of biodiversity monitoring differ among the NGOs starting from rare species or habitat monitoring in particular localities up to statistically well planned countrywide monitoring implemented as part of project activities.

Twelve (80%) of NGOs were willing to take part in public biodiversity monitoring and birds, plants and invertebrates were the most desired monitoring objects. Three (20%) of NGOs would not want to participate in the BD monitoring. Two main reasons were mentioned: 1) such activity was not in priorities of NGO, 2) NGOs do not have specialists that would be able to implement such activities.



Sweden

General information about the organizations

Unlike in Estonia and Latvia, nature conservation NGOs in Sweden have a long history and the survey reflected it. Majority of the surveyed nature conservation NGOs (80%) in Sweden were established in 1900 - 1970, three (20%) were established in 1980ies. The oldest nature conservation NGOs are the Swedish Botanical Society (1907), Swedish Society for Nature Conservation (SSNC) (1909) and the Nature Conservation Association of Skaraborg (1909). The survey encompassed 46 % local level NGOs, 27% national level and 27 % regional level NGOs. There is a big range in number of members in NGOs, like in Latvia and Estonia, but obviously the highest number is much larger - up to 180 000 members. The average is 12943 (median is 500 members). Nature conservation NGOs which have several hundred members dominated in the survey, because the majority of the studied NGOs were of local level.

Nature conservation NGOs in Sweden are active and there is a tendency to implement projects longer than one year, as 67% of the NGOs had projects of this category. In Sweden 89 projects or campaigns have been implemented by the surveyed 15 NGOs and mean number of projects per NGO is seven. Only two local NGOs have not had any projects. To sum up, the NGOs, implementing the largest projects and the highest number of projects is those acting on a national level.

Three NGOs, one of regional level, two of national level, publish their own journals at least annually, some even six times per year. All NGOs have their own home pages, but only two of them, of national level, have it also in English.

The most common priorities among all level NGOs

were to increase their knowledge and organize particular campaigns or activities, such as field trips, printing of annual journals etc. Unlike the NGOs in the Baltic States, applied nature conservation was mentioned as a priority only by one NGO. Only two out of 15 mentioned monitoring as one of the priorities.

Interactions with other NGOs

All nature conservation NGOs mentioned that they co-operate with other NGOs and majority (91 %) are members of national NGO networks. Some local NGOs co-operate only with their own NGO working in regional or national level.

Five NGOs (33%) are members of international networks; all of them are national NGOs. Six (40%) NGOs implement international projects and the maximum number of projects per one NGO is five, average is 2.4 projects per one NGO. The main reason for not launching international projects was that it was out of NGOs main organisational targets, unlike the situation in the Baltic States.

Expertise, needs and capacities of organisation

All NGOs evaluated themselves high in all four areas (Expertise in your main fields, Public relations, Financial management, Project development), but slightly lower estimations were given in public relation and financial management area.

Two main needs of nature conservation NGOs in Sweden included lack of project management capacity and lack of human resources, which might be interdependent. It was pointed out, that mainly involvement of young nature conservationists is the challenge for most of nature conservation NGOs in Sweden, unlike the situation in the Baltic States. Besides the applied nature conservation as a main area of expertise, only 40 % of the NGOs mentioned also policy-lobbying and education of general public as their main area of expertise. In the opposite, in Estonia, Lithuania and Latvia almost all NGOs mentioned policy-lobbying and education of general public as their main area of expertise.

Experience in involving general public in biodiversity monitoring

Majority (87%) of NGOs had experiences of public biodiversity monitoring and it had been carried out for more than three years. Only one regional and two local level NGOs did not have experience in biodiversity monitoring. In all cases public biodiversity monitoring was part of specific project or seasonal campaign.

Mainly (46 %) NGO had involved less than 50 people annually, followed by 101-300 people annually (27 %) and 50-100 people (18%) annually. One NGO had involved more than 300 people annually. Mainly members took part at biodiversity monitoring for general public.

The monitoring is mainly volunteer-based (60-100%); however own NGOs funds play an important role in biodiversity monitoring for four NGOs (36%) as well. Despite the fact that in Sweden volunteers do the main monitoring work, usually the management of the projects are done by employed officials at the national level of the NGOs. The government and regional financial support allows also purchasing equipment, literature, publishing information leaflets etc..

82% of NGOs are also managing process of monitoring. Two NGOs use all three types of feedback for participants, such as annual meetings, information in the home page and distribution of printed materials, but the main type of feedback provided is the distribution of printed materials via surface mail.

Lack of human resources was mentioned as the main factor hindering the biodiversity monitoring for general public in Sweden and financial restrictions were evaluated as the least problem. The monitoring objects of nature conservation NGOs are mainly plants (54%) and birds (23%) as well as invertebrates (7.6 %), forests (7.6%) and fungi (7.6%).

'Flora watch' program in Sweden an excellent example of biodiversity monitoring for general public

The Swedish Flora Watch program started 1987 and is targeted to monitor threatened vascular plant species in Sweden. The Flora Watch program is coordinated by one person from Swedish Botanical Society and it is run in cooperation with the County boards, Swedish Threatened Species Unit and SEPA. There are 24 counties responsible and 300-400 persons are doing plant counts and evaluating site quality. The Flora Watch program is partly financed by the Swedish Threatened Plant Species Unit and SEPA. Flora watchers and county responsible are doing their work

voluntary.

The aim of the program is to monitor threatened vascular plants and to discover population trends. Moreover the aim is also to promote actions, to conduct actions and to disseminate knowledge.

There are in Sweden 55 species in the category critically endangered, 156 species in the category endangered and 112 species in the category vulnerable and they are all monitored in the Flora Watch program. In the category Near threatened there are 126 species and in some counties a selection of these are surveyed. In the category data deficient there are only six species and they are also searched for.

As an example of the work can be mentioned that 2007 there were 3225 controls of known localities of threatened plants and in addition to this there were 2579 new findings of threatened plants, mainly on the Baltic island Öland.

The most important factors to inspire flora watchers are as follows: that their work is paid attention to, regular meetings, maps of good quality, reports of their work, and positive result of the surveys. The results of Flora Watch program are used in preparation and updating of Red Data Book, in species action plans, reporting on EC directive species status in Sweden, environmental monitoring etc. The dissemination of results include regular publication in 'Svensk Botanisk Tidskrift', articles/reports by regional NGOs, articles in the website of Swedish Botanical Society, preparation and printing of information leaflets etc. Monitoring data are entered directly and can be summarised from Species Gateway (artportalen.se) - an internet mega data base where data on bird, invertebrate, mammal, and plant species monitoring are kept. Fields of improvement include standardisation of monitoring, prioritisation of certain species, dissemination of knowledge, involvement of new flora watchers etc.


There is a wish to increase the numbers of young volunteers in the Flora Watch program in Sweden.

Table 1

Summary of performance of nature conservation NGOs in Lithuania, Estonia, Sweden, and Latvia

	Latvia	Estonia	Lithuania	Sweden
Period of establishment for majority of NGOs	1990 – 2007	1990 – 2004	1990 – 2007	1900 – 1970
Number of members: median (range)	30 (9 – 785)	200 (8 – 600)	59 (3 – 500)	500 (30 – 180 000)
Non-profit nature conservation NGOs without membership	Yes	Yes	Yes	No
Mean number of projects per one NGO regardless the project duration (range)	26 (4 – 108)	16 (3 – 82)	8 (1 – 13)	7 (1 – 25)
Mean number of international co-operation projects per one NGO (range)	3 (1 – 11)	4 (1 – 36)	3 (1 – 20)	2 (1 – 5)
Number of NGOs with membership in international networks	5 (42%)	2 (33%)	3 (25%)	5 (33%)
Number of NGOs implementing biodiversity monitoring for general public	4 (33%)	4 (67%)	5 (42%)	13 (87%)
Two main financial sources for monitoring (% in average per country for all NGOs)	Voluntary (63%), Government (61%)	Government (45%) International funds (55%)	Voluntary (70%) International funds (42%)	Voluntary (80%) Government (23%)
Monitoring objects	Birds, plants, mammals, habitats, invertebrates, molluscs	Habitats and communities, birds	Birds, plants, habitats and communities	Birds, plants, invertebrates, fungi, forests

Internet based nature observation reporting systems for general public




Another option for general public to participate at nature conservation activities is to report observations of any species of birds, mammals, plants, reptiles, amphibians and invertebrates into internet database. Such reporting systems have been in use in Sweden, Finland and other countries for a quite long time and are developing in the Baltic States during the last five years. This activity requires big financial resources and little can be achieved only with volunteers' work.

In Latvia internet based nature observation reporting system www.dabasdati.lv was established in 2008 by Latvian Fund for Nature and Latvian Ornithological Society and so far, there are about 600 users. The number of observations has reached 17000 in total and the number of identified species is close to 2000. Mainly observations of birds, butterflies and mammals are reported. To encourage people to participate, there is a possibility to place nature object photos in this database and to ask experts for help with species identification.

In Estonia there are three internet-based databases for nature observations. The database, located at the website <http://loodusvaatlused.eelis.ee>, was established four years ago by the Estonian Environment Information Centre and the Estonian Naturalists' Society to report on nature observations in Estonia and general public is the main target audience. Now the number of users has reached about 500. There

are 170 000 inputs so far and majority of them are bird observations. A very different database of nature photos only is found at address <http://www.looduspilt.ee>. Amateur photographers, who are interested in nature and nature photography, manage this database. It has forums, rating and commenting system. The third, website 'Estonian eBiodiversity' <http://natmuseum.ut.ee/eestiurikkus> and underlying database has several functions, such as, species references in literature, species in scientific collections (to the level of specimen), species observations, DNA barcodes for specimen samples, and collective register of Estonian species. Occurrence of species can also be recorded. However, only specialists have done the input to the database until now, but through joining the workgroups, it can also be done by general public. There are more than 24000 species recorded in this database so far. Estonian Ministry of Education and Science, Ministry of the Environment, University of Tartu, Estonian University of Life Sciences, Tallinn University of Technology, Estonian Naturalists' Society, and Estonian Museum of Natural History support the development of the information system 'Estonian eBiodiversity' by grants, co-financing, participation or consultations. Despite the encouraging start of this activity, the fund rising to maintain and develop these databases is a big challenge in the Baltic States.

Summary



This publication summarizes overview on capacities and needs of non-governmental nature conservation organizations in Estonia, Latvia, Lithuania, and Sweden and their role in involvement of general public in biodiversity monitoring surveyed in the Nordic Council of Ministers Office in Latvia financed project “Nature conservation NGOs in the Nordic-Baltic region working together”. The publication was prepared by Latvian Fund for Nature (Latvia), Estonian Fund for Nature (Estonia), Sustainable Development Initiatives - DVI (Lithuania) and Swedish Botanical Society (Sweden).

The majority of nature conservation NGOs in Estonia, Lithuania and Latvia were founded in perestroika period (late 1980ies) and post-soviet era, except some NGOs, which were established as societies of professionals in 1950-ies and developed into NGOs after the soviet era. There are also non-profit nature conservation NGOs, which do not have any members at all and work as entrepreneurs. On the contrary, in Sweden the origin of most of the nature conservation NGOs dates back to the period 1900 – 1970 and none of the surveyed NGOs were without membership. The regional and local nature conservation NGOs are more common in Sweden than in Estonia, Lithuania and Latvia, which was partly reflected also in our survey. Many regional or local nature conservation NGOs in Latvia, which were established in post soviet era have ended their activities by now, because the core people of these organisations were involved in their own

businesses or moved to other places. The number of members is higher in Sweden than in the Baltic States reaching even 180 000 members, which is obvious as the population size in Sweden is much larger and there is a long tradition of public participation at nature conservation sector.

In general, nature conservation NGOs in Sweden, Estonia, Lithuania and Latvia are active. Still Lithuanian and Estonian nature conservation NGOs are more active international players and have implemented more international projects than their colleagues in Latvia and in Sweden. In Latvia the implementation of international projects was hampered by lack of project management capacity and human resources, which are interdependent factors, but in Sweden it was often mentioned to be out of main organisational targets. Unlike in Latvia and in Estonia, in Lithuania and in Sweden there is a tendency to implement longer projects, as more than a half of the NGOs have had projects more than one year long. However, Latvian and Swedish NGOs are more active in being members of different international networks. In our opinion, it is important for the international co-operation to have the organisation home page in English, as very often, it gives the first impression and basic information on the NGO, and our survey proved that nature conservation NGOs having the highest number of international projects are the ones having also their homepages also in English. To sum up, the NGOs, implementing the largest projects and the highest number of projects in general in the Baltic States, are those national level NGOs acting as entrepreneurs, having their own offices and employing staff. On the contrary, in Sweden the largest and longest projects have been implemented by large national level nature conservation NGOs with long history of voluntary work and the availability of permanent office premises and full-time employed staff is less crucial for NGOs existence. High proportion of volunteers can be explained by the fact, that economical situation in Sweden is better and more stable and people are having enough income and free time. Therefore, they can devote their free time for nature conservation activities.

All nature conservation NGOs evaluate themselves high in their main areas of expertise, such as applied nature conservation, however, they feel shortage in project management capacity. Human resources are crucial for Swedish and

Latvian NGOs, but its background is different. In Latvia there is a lack of persons among nature conservationists in Latvia who have good skills at project initiation, development and management and have time for activities in NGOs and there is lack of well-qualified amateurs, but in Sweden the attraction of young members is a challenge for the future.

Lack of cooperation with other NGOs was mentioned as important factor by some NGOs in Lithuania.

The involvement of general public in biodiversity monitoring is quite new in the Baltic States and only 33-67% of surveyed NGOs are active in this field in contrary to Sweden where 87% of the surveyed NGOs have experience in biodiversity monitoring. The number of people involved in monitoring annually varied from less than 50 to more than 300 in all four countries. In Sweden and in Lithuania the monitoring is mainly based on voluntary work, but in Latvia and Estonia government support for running the monitoring schemes play very important role. Despite the fact that in Sweden volunteers do the main monitoring work, usually the management of the projects are done by employed officials at the national level of the NGOs. The government and regional financial support allows also purchasing equipment, literature, publishing information leaflets etc. In Estonia most of the NGOs do not have a long-term capacity (that means stable, guaranteed resources) to manage the biodiversity monitoring process and this task has been overtaken by the governmental organizations. Lithuanian and Estonian colleagues are successful in attracting international funding for monitoring, while this source is completely lacking in Latvia and in Sweden.

The main targets and complicity of biodiversity monitoring differ among the NGOs starting from rare species or habitat monitoring in particular localities up to statistically well planned countrywide monitoring. Birds and plants are the most common monitoring objects in all four countries. In contrary to Estonia, in Latvia the NGOs often implement also countrywide state biodiversity monitoring, as NGOs proved to be more efficient and target oriented than governmental organisations. The lack of financial resources and the lack of amateurs with good skills were mentioned as the main obstacles to expand the biodiversity monitoring in the Baltic States. The lack of human resources was mentioned as the main factor hindering the biodiversity monitoring for general public in Sweden as well, but financial restrictions were evaluated as the least problem.

The communication with volunteers is of crucial importance to keep people interested in monitoring. Therefore, regular communication and feedback to monitoring participants was in agenda of all NGOs working in biodiversity monitoring. Good examples of biodiversity monitoring for general public in the Baltic States are common bird monitoring and monitoring of rare plants and spring habitats in Latvia, biodiversity monitoring in North Vidzeme Biosphere Reserve, as well as White-tailed Eagle breeding success monitoring in Lithuania.

Despite the good start in biodiversity monitoring for general public in the Baltic States, the nearest future of biodiversity monitoring for general public is unclear. In Latvia the biodiversity monitoring for amateurs was to a great part sponsored by government, therefore it is very likely that due to economic recession the monitoring will be continued at much less extent, if at all. The attraction of more international funding, transferring of skills to people interested in monitoring and attraction of good managers for biodiversity monitoring would be a possible solution in the Baltic States. This is the case, where international co-operation plays a crucial role.

Now, in Estonia and in Latvia the most popular and open to general public participation in nature observations is the possibility to report everyone's nature observations in the internet based report systems, such as the Estonian Nature Observations Database loodusvaatlused.eelis.ee and internet-based nature observation system in Latvia dabasdati.lv. However, the way to use these systems for annual monitoring of particular species or habitats and data analysis has not been developed yet. Similar reporting system, artportalen.se, has been developed in Sweden and there is the possibility to report on the status of species what members of Swedish Botanical Society successfully use in monitoring of threatened plant species.

To sum up, there is a will to continue biodiversity monitoring for general public in NGOs in the Baltic States, however it is considered to be a big challenge for them. The increase of number of young volunteers for biodiversity monitoring is a challenge for many nature conservation NGOs in Sweden, also for Swedish Botanical Society. The possible field for further co-operation could be preparation of detailed description of main principles for successful biodiversity monitoring for general public.



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Ziemeļu Ministru padomes
birojs Latvijā

Survey about the needs and capacities of nature conservation NGOs in the Nordic-Baltic region and their role in involving general public in biodiversity monitoring

NCM Office in Latvia project `Nature conservation NGOs in the Nordic-Baltic region working together` implemented by Latvian Fund for Nature (LV), Sustainable Development Initiatives (LIT), Estonian Fund for Nature (EE), and Swedish Botanical Society (SE)

Dear Madam/Sir!

Your reply to this questionnaire is very welcome. Please, read the questions and answer them by ticking or marking in colour the answer/s or writing the answers. The information provided by you will be treated confidentially. The results of this survey will be summarized in the project publication available in the internet at the end of the project.

1. Information about your organisation

1.1. When was your organisation founded?

Month/year _____

1.2. How many members does your organisation have?

Amount _____

1.3. Do you work on

- § Local level
- § Regional level
- § National level

1.4. Do you have your own homepage?

Yes
No

If `Yes`, do you have English version of your home page?

Yes
No

1. Information about your organisation

1.1. When was your organisation founded?

Month/year _____

1.2. How many members does your organisation have?

Amount _____

1.3. Do you work on

- § Local level
- § Regional level
- § National level

1.4. Do you have your own homepage?

Yes
No

If 'Yes', do you have English version of your home page?

Yes
No

1.5. Which type of communication among members do you have in your organisation?

- § Regular meetings, at least once per six month
- § Regular meetings, at least once per year
- § Communication by e-mails
- § Communication using your homepage
- § Other _____ (please specify)

1.6. How many projects, including campaigns and seasonal highlights, did your organisation implement in the past three years?

Duration of the project	amount of projects implemented
-------------------------	--------------------------------

< 3 month	_____
3 – 12 months	_____
> 12 months	_____

1.7. Please, list three top priorities of your NGO for the next two years!

1. _____
2. _____
3. _____

2. Interactions with other NGOs

2.1. Do you co-operate with other NGOs'?

Yes

No

2.2. Is your organisation a member of any national NGO networks?

Yes

No

If 'Yes', please specify _____

2.3. Is your organisation a member of any international NGO networks?

If 'Yes', please specify _____

2.4. Have you been implementing international co-operation projects?

Yes

No

If 'Yes', please give the number of the projects _____

If 'No', please specify, why

1– Applies fully

5 – Does not apply at all

A. Lack of project management capacity	1	2	3	4	5
B. Lack of human resources	1	2	3	4	5
C. Lack of foreign language skills	1	2	3	4	5
D. It is out of our main organisational targets	1	2	3	4	5
E. We tried to launch the projects, but did not succeeded	1	2	3	4	5

3. Expertise, needs and capacities of your organisation

3.1. Please, evaluate the expertise of your organisation!

1 – no experience

5 – excellent experience

A. Expertise in your main fields	1	2	3	4	5
B. Public relations	1	2	3	4	5
C. Financial management	1	2	3	4	5
D. Project development	1	2	3	4	5
E. Other (please specify)	1	2	3	4	5

3.2. Please, evaluate the needs of your organisation!

1 – Applies fully

5 – Does not apply at all

A. Lack of project management capacity	1	2	3	4	5
B. Lack of human resources	1	2	3	4	5
C. Lack of sufficient funding	1	2	3	4	5
D. Lack of co-operation with other NGOs	1	2	3	4	5
E. Lack of expertise in (please specify the field)	1	2	3	4	5
F. Other (please specify)	1	2	3	4	5

3.3. Please, indicate three main areas of expertise of your organisation!

- § Applied nature conservation (habitat management, preparation of management plans etc.)
- § Policy-lobbying
- § Education of general public
- § Consultation services
- § Other (please specify) _____

4. Experience in involving general public in biodiversity monitoring

Explanation: biodiversity monitoring for general public means monitoring of birds, plants or other groups of organisms or habitat types carried out by amateurs on regular (annual, biannual etc.) basis. Regular actions for schoolchildren do not classify as biodiversity monitoring in this survey.

4.1. Do you have experience in implementing biodiversity monitoring for general public?

- Yes
- No

If 'Yes', please answer the following questions, if 'No', go to 4.2.

4.1.1. Was it within the particular project, campaign, seasonal highlight?

- Yes
- No

4.1.2. Is it part of your organisation's regular activities?

- Yes
- No

4.1.3. How many people in average got annually involved?

- § < 50
- § 50 – 100
- § 101– 300
- § >300

4.1.4. The type of participants at the public biodiversity monitoring

- § Members of our organisation, % _____
- § Others,% _____

4.1.5. What kind of financial resources do you use for public monitoring?

Voluntary work, % _____ Government sponsored, % _____
Other national funds, % _____ International funds, % _____
Own NGO`s Funding (fees, donation etc.), % _____

4.1.6. Are you managing the monitoring process?

- Yes
- No

If `Yes` please answer the following questions and skip 4.2.

If `No`, you have completed the form, thank you!

4.1.7. How do you provide feedback for people involved?

- § Annual meetings
- § Distribution of printed materials with results using surface mail
- § Placing information on organisation homepage

4.1.8. Capacity of your organisation for managing the biodiversity monitoring

1 – Applies fully 5 – Does not apply at all

A. Our organisation is lacking management capacities	1	2	3	4	5
B. Our organisation is lacking human recourses	1	2	3	4	5
C. Our organisation is lacking financial recourses	1	2	3	4	5

4.1.9. For how long have you been involved in biodiversity monitoring?

- § One year
- § 2 – 3 years
- § More than three years

4.1.10. Your subject of biodiversity monitoring:

- § Birds
- § Plants
- § Invertebrates
- § Mammals
- § Amphibians
- § Other (please specify) _____

4.2. Would you be interested to take part at the biodiversity monitoring?

Yes, please specify

- § Birds
- § Plants
- § Invertebrates
- § Mammals
- § Amphibians
- § Other (please specify) _____

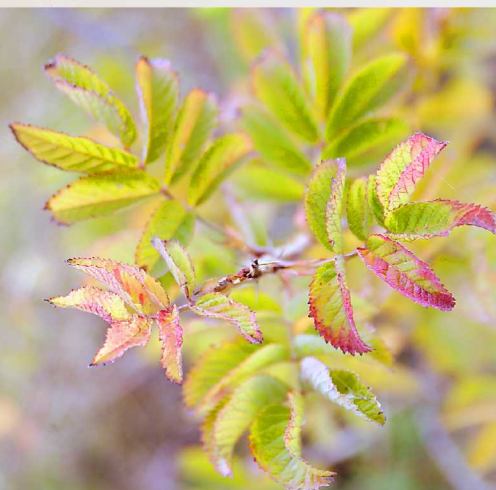
No, because _____ (please specify)

Thank You very much for Your participation!

Please, return the questionnaire by e-mail or surface mail to the following address:

Liene Salmiņa, Latvian Fund for Nature, Dzirnavu Street 73-2, Riga, Latvia
e-mail: lsalmina@latnet.lv, mobile phone: +371 26439189

More about the project: www.ldf.lv





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Ziemeļu Ministru padomes
birojs Latvijā

Workshop Report

**'Involvement of general public in biodiversity monitoring:
experience in the Nordic-Baltic region'**

The goal of the workshop

- to exchange best experience on the biodiversity monitoring for general public in the Nordic-Baltic region;
- to discuss particular organisational and methodological questions regarding biodiversity monitoring for general public.

October 24, 2009, 25
Peldu Street (Old City of
Riga), Riga, Ministry of
Environment of Latvia,
1st floor, Room 101.

The workshop was opened by **Ms. Liene Salmina**, Latvian Fund for Nature and **Ms. Daina Mežecka** from the Nordic Council of Ministers Office in Latvia. Ms. Daina Mežecka welcomed workshop participants and informed about the opportunities to apply for the NCM grants and information materials on Nordic-Baltic Mobility Programme for Public Administration and on Goals and Priorities of Nordic Council of Ministers, 2009-2012, were distributed.

Ms. Sigita Baronaite, from the Foundation for the Development of Nature Protection Projects in Lithuania gave presentation 'Monitoring of the White-tailed Eagles (*Haliaeetus albicilla*) in Lithuania as a practical mean of protection of species' informing about the project 'Conservation of White-tailed eagles in Lithuania' launched in 2003 which included establishment of monitoring network for volunteers. Other project tasks were to identify and to increase the number of breeding White-tailed eagle pairs, to raise public awareness and to promote nature protection management, to prepare

proposals for the Ministry of Environment of the Republic of Lithuania on the White-tailed eagle protection in Lithuania. The volunteers monitor breeding sites and status of natural and artificial nests of White-tailed eagle. Students and pupils were involved in rising of demonstrative artificial nests and different awareness rising campaigns for general public were carried out. There is a good cooperation with other NGOs in Lithuania, municipalities and different institutions which helped to turn attention of general public to the project and to attract potential volunteers. The main project supporter is UAB 'Litagra' (Litagra Group). Project leaflets and CD were distributed among workshop participants.

Mr. Ainārs Auniņš from Latvian Ornithological Society informed about the development and progress so far of the Volunteer-based common bird monitoring in Latvia. Common bird count history in Latvia dates back to 1962 and from project based monitoring it has become a part of State monitoring program in Latvia since 2006. Participants of monitoring receive s and other

reimbursement of travel expenses, but data analysis and bird counting is carried out voluntarily. The new sampling design and methodology was prepared 2003-2005. Despite the challenges of the monitoring program such as lack of bird counting traditions among amateur ornithologists, lack of interested amateurs, and lack of counting experience, and lack of funding, the number of full counts done by amateurs reached about 30 routes in 2006. Communication with amateur ornithologists is important to maintain interest for monitoring. Therefore, regular communication by means of annual publication in the LOB magazine 'Putni dabā', personal reports, regular presentations in the annual meetings of LOB, small presents for those carrying out "full counts" such as T-shirts, badges etc. and results published in the website of LOB are of great importance. There are two persons responsible for this monitoring at the LOB, one is working with volunteers and other is responsible for data analysis.

Mr. Leif Andersson, Ms. Margareta Edqvist from Swedish Botanical Society gave presentation on the Flora Watch Program in Sweden which has been carried out by Swedish Botanical Society since 1987. The Flora Watch program is targeted to monitor threatened plant species in Sweden and is coordinated by one person from SBS. There are 24 county responsible and 300-400 persons are doing plant counts and evaluating site quality. The Flora Watch program is partly financed by the Swedish Threatened Plant Species Unit and SEPA. Flora watchers and county responsible are doing their work voluntarily. The most important factors to inspire flora watchers are as follows: that their work is paid attention to, regular meetings, maps of good quality, reports of their work, and positive result of the surveys. The results of Flora Watch program are used in preparation of Red Data Book, in species action plans, reporting on EC directive species status in Sweden, environmental monitoring etc. The dissemination of results include regular publication in 'Svensk Botanisk Tidskrift', articles/reports by regional NGOs, articles in the website of Swedish Botanical ata

Society, preparation and printing of information leaflets etc. Monitoring data are entered directly and can be summarised from Species Gateway (artportalen.se) - an internet mega database where data on bird, invertebrate, mammal, and plant species monitoring are kept. Fields of improvement include standardization of monitoring, prioritization of certain species, dissemination of knowledge, involvement of new flora watchers etc. There is a lack of young volunteers and much effort is needed to involve them into the Flora Watch program in Sweden. The presenting author demonstrated examples of the data fields available at the database for workshop participants.

Ms. Margareta Edqvist gave representatives from each country examples of leaflets on plant species and copies of 'Svensk Botanisk Tidskrift'.

Mr. Veljo Runnel from University of Tartu, Natural History Museum, Estonia gave presentation on biodiversity databases in Estonia. The website Estonian eBiodiversity is an output for project "Estonian biodiversity data base and information network supporting Natura 2000". Estonian Ministry of Education and Science, Ministry of the Environment, University of Tartu, Estonian University of Life Sciences, Tallinn University of Technology, Estonian Naturalists' Society and Estonian Museum of Natural History support the development of the information system Estonian eBiodiversity by grants, co-financing, participation or consultations. Website and underlying database has several functions:

- species references in literature,
- species in scientific collections (to the level of specimen),
- species observations,
- DNA barcodes for specimen samples,
- collective register of Estonian species.

Occurrence of species can also be recorded through observations. For this purpose the website has special workbench. It is possible to link photos and drawings to species records.

The input to the database has been done until now by specialists, but through joining the workgroups it can be done also by general public - teachers, students, amateur

researchers etc. Specialists will monitor the correctness of data.

At the moment (Oct. 2009), there are **24811** species recorded in database. The number is constantly increasing, as new data from references and collections are added.

A very different database of nature photos can be found at address <http://www.looduspilt.ee>. This is managed by amateur photographers, who are interested in nature and nature photography. It has forums, rating and commenting system.

The species names follow one species checklist for Estonia. Localities of rare species are not shown on the map. The presenting author demonstrated the data input and data fields available at the database for workshop participants.

Mr. Reigo Roasto from Estonian Environment Information Centre gave presentation on Estonian Nature Observations Database developed in cooperation with the Estonian Environment Information Centre and the Estonian Naturalists Society - <http://loodusvaatlused.eelis.ee>. The data base was established four years ago and now the number of users has reached about 500. There are 170 000 inputs so far and majority of them are bird observations. The database allows to visualize boundaries of protected nature territories etc. The establishment of database was expensive. The Estonian Nature Observations Database can be used for educational purposes and in scientific work as well. The presenting author demonstrated the data input and data fields available at the database for workshop participants.

Ms. Inta Soma from North Vidzeme Biosphere Reserve Administration in Latvia gave presentation on involvement of general public in biodiversity monitoring in North Vidzeme Biosphere Reserve. The monitoring was based on the parameters chosen by local people and include bat, white stork, beaver, water quality, air quality, beetle, *Heracleum sosnowskyi*, tree alleys and some other monitoring subjects. Experience exchange with colleagues from Latvia and Canada was important to implement the monitoring than

successfully. Methodology handbooks and informative materials were prepared and distributed among potential volunteers. The number of volunteers increased from less than 100 in 2005 to more than 400 in 2008 and majority of them were pupils and employed persons. The monitoring data are used by ornithologists, state institutions, and in schools. There are no special nature educational schools in Latvia, the monitoring success mainly is based on simplicity of data gathering, the fact that the monitoring subjects have been chosen by volunteers themselves, and good communication through schools and public libraries.

Mr. Andris Klepers from Latvian Fund for Nature gave presentation on project 'Dabas dati' in which internet based nature observation reporting system www.dabasdati.lv were established. Observation of any species of birds, mammals, plants, reptiles, amphibians and invertebrates can be reported into this database. The database was launched in December 2008 with the support of Swedbank and so far, there are about 600 users. The number of observations has reached 13010 in total and the number of identified species is close to 2000. There is a possibility to put the photo in the website as well. Experts help with species identification. Benefits of this activity for nature conservation and sciences were mentioned. One of the challenges for future includes improvement of software possibilities and involvement of more people. The data base is located on three PC: on one PC the map is kept, on second design, on third data itself. The challenge is fund rising to continue the work and maintain the database.

Discussion on general principles for initiation and implementation of biodiversity monitoring for general public.

Facilitated by Ms. Liene Salmiņa, Latvian Fund for Nature.

The most important issues to initiate and implement a good biodiversity monitoring mentioned by workshop participants during the discussion are listed in a logical sequence. Four main groups of „must” for biodiversity

monitoring are distinguished: general outline, human resources, use of monitoring data and financing.

The checklist for the biodiversity monitoring was prepared during the workshop and four main groups of „must” for biodiversity monitoring are distinguished: General outline, Human resources, Use of monitoring data and Financing.

General outline

- Targets of biodiversity monitoring
- General monitoring scheme
- Sampling design
- Coordination scheme
- Promotion of the work

Human resources

- Involvement of volunteers
- Involvement of experts, who will analyse the data
- Cooperation among NGOs from different countries

Use of monitoring data

- Link to State Environment Data Bases/other data basis and data compatibility
- Linkages with educational programmes

Financial resources

- Sustainability of projects
- Financial support via projects, state programmes etc.

Ms. Liene Salmiņa asked each of the participants for their opinion and evaluation of the workshop. Opinions on similarities in biodiversity monitoring for general public in all countries such as fund raising challenge, communication with volunteers, use of monitoring data, importance of experience exchange and potential cooperation among different countries etc. were mentioned. The participants concluded that the workshop was useful and gave inspiration and new ideas for future work.

Ms. Liene Salmiņa thanked the participants for participation at the workshop and small presents were given to the presenting authors. The workshop was closed at 16:35.