

Capacity Evaluation of Latvia in Fields of Biological Diversity,
Climate Change and Land Degradation

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FINAL REPORT

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I Overview of NCSA Process in Latvia

1.1. Introduction and scope of NCSA

1.1.1. Introduction and management of the Project

The main objective of the project is to identify priority needs for capacity development in Latvia in order to address global environment issues. Analysis is concentrated across three thematic areas – climate change, biological diversity and land degradation, however it also explores synergies among these three areas. The scope of the project is to make recommendations to maximize the efficient use of existing capacity, sustain existing capacity developed through the implementation of international projects, and develop new capacity to maximize efficiency in the respective areas of the following thematic conventions:

- Rio de Janeiro Convention “On Biological diversity”(adopted in 1992);
- UN General Convention “On Climate Change” (adopted in 1992);
- UN Convention „United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa” (adopted in 1994).

The Project was financed and supervised by UNDP and the Global Environmental Facility (GEF), and elaborated in accordance with GEF methodological guidance. The project was executed by the Ministry of Environment and implemented by the State enterprise *Vides Projekti*. The Project Director was Mr. Rolands Bebris, head of the Environment Protection Department under Ministry of Environment. The project was supervised by a Steering Committee that consists of 10 representatives.¹

1.1.2. The main steps of the Project

The NCSA was launched at the end of 2002 in Latvia. The first part of the NCSA process in Latvia was the *stocktaking exercise*. A team of consultants was hired (four individuals each with a focus on a particular thematic area, plus a legal expert) which developed and approved a common methodology and research plan for this exercise, that was partially based on the UNITAR guide. The stocktaking was conducted through desk studies, an inception workshop and individual consultations with key stakeholders (~120 persons). The methodology was revised and several amendments made after submitting interim reports. This was done through discussions during a mission of international consultant. The amendments were based on experience and lessons learned during the initial stages of the stocktaking and assessment. During the preparation of the assessment there was a sociology consultant who advised the team on the formulation of issues and constructively structuring potentially sensitive problems.

As per the developed methodology, the *thematic assessments* were conducted as a result of consultations with key stakeholders and in close cooperation with the focal points of the conventions (all three focal points of the UN conventions for climate change, biodiversity and land degradation are located within the central infrastructure of the Ministry of Environment) (Annex 1: The Structure of the Administration of Environment Sector in Latvia). The information in the thematic assessments was mainly drawn as a result of interviews with stakeholders and data obtained through the stocktaking exercise. Due to concerns discussed early on in the NCSA process, great effort was made to ensure that these assessments evaluated

¹ The Project Steering Committee consists of representatives from the Ministry of Environment, Ministry of Regional Development and Local Authorities, Ministry of Economics, Ministry of Transport and Communications, Ministry of Agriculture.

only the capacity issues identified by stakeholders and did not simply reflect the personal opinions of the hired consultants (Annex 2: List of Stakeholders for Thematic Assessments).

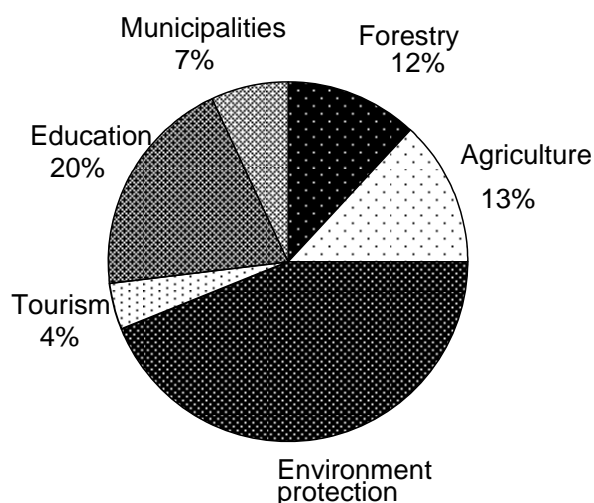
The thematic assessments were structured to incorporate cross – cutting aspects into analyses: to indicate synergy and to allow for a comparison of thematic profile issues in a cross – cutting dimension. In order to ensure a compatibility of capacity issues across the conventions, the assessments were divided into the following fields:

- Implementation of Action Programmes and Technologies,
- Scientific issues related to 3 conventions and Preparation of Specialists,
- Obtaining, Processing, Monitoring, and Exchanging Information ,
- Involvement and Education of the General Public,
- Co-operation with NGOs, and
- Basic Capacity of Institutions Responsible for Convention Implementation and Coordination across the Thematic Areas.

As a result, the thematic profiles were developed to include the main information about the current situation in implementing the conventions, as well as an assessment of the existing capacity and its constraints.

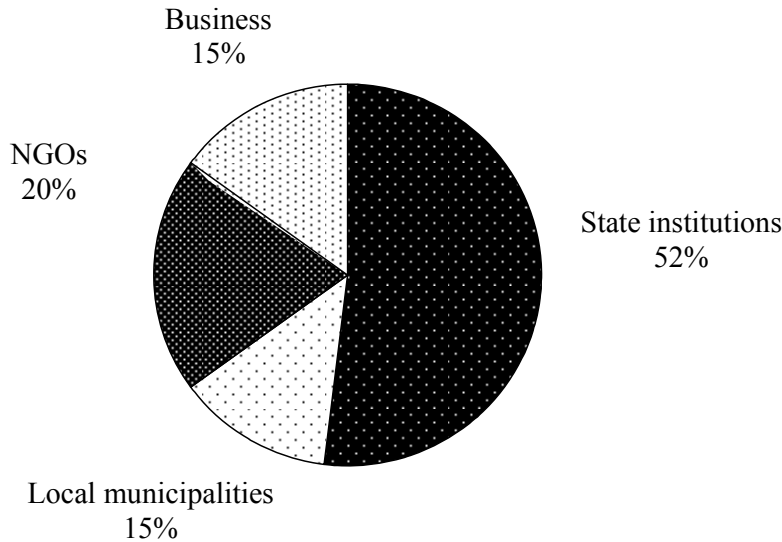
The stocktaking process was then followed-up with five regional² seminars conducted throughout Latvia. During these seminars, the findings of the preliminary assessments were reviewed and priorities were set at the regional level. These seminars were attended by a range of local stakeholders involved in environmental management: local NGOs, environmental and/or agriculture management-related institutions, municipalities, education and science establishments, farmers and private sector representatives. The total number of stakeholders involved in the regional seminars was around 200.

Picture 1: *Sectors represented by the participants of the five regional seminars.*



Picture 2. *Sectors represented by the participants of the five regional seminars.*

² Latvia is divided into four regions (Latgale, Vidzeme, Kurzeme, Zemgale) plus one (the capital city Riga and its surrounding territory) and the seminars were organized using this territorial division as a basis.



The *prioritization process*, which was conducted at the regional seminars, was important in highlighting the issues of the greatest concern at the grassroots level in the area of environmental management. It is important that thematic assessments and prioritization were both reviewed here because issues presented in thematic assessment changed their scope and focus-points as a result of in-depth discussions at the regional level. In particular, this process showed certain disparities between legislation and execution which is vital in a capacity assessment process such as the NCSA and composed basic information for further capacity assessment.

The next step in the NCSA process in Latvia was a high-level priority-setting seminar in early February 2004, which involved representatives from the relevant ministries. The high-level priority setting exercise was conducted using the capacity constraints identified through the thematic reports and regional priority setting exercise as a basis. The representatives assembled at this seminar set 17 priorities (Annex 3: Priorities set after Regional Stakeholder Seminars) out of about 300 identified issues.

The findings of the three processes described above (stocktaking, thematic assessments and in-depth analysis) are the platform upon which all further discussions and NCSA processes until the development of the action plan are built upon. At this stage of *in-depth analysis*, a Project consultant team was established which consisted of one international and two national consultants.

The first task of the team was to analyze the documentation prepared in the first part of the project and to revise the priority issues to capture the main issues and constraints. The team proposed to reformulate 17 priorities set in the high-level meeting in order to indicate the nature of a problem instead of stating a solution. The team also initiated adding to the priority list three land degradation issues as it was clear that this was the least explored thematic areas and it was underrepresented during the processes described above due to the severe human resource and awareness constraints. The NCSA Project Steering Committee and focal points of the conventions approved the 20 priority capacity constraints proposed by the team reformulated to indicate the nature of a problem instead of stating a solution.

The priorities were further examined in in-depth analyses prepared by four national consultants. Each consultant prepared in-depth analyses about several priorities that were grouped into

thematic categories. The analyses explored causes and barriers, as well as gave lists of recommendations for necessary actions.

The issues and recommended actions were presented, discussions and validated during a two-day *validation* workshop attended by a wide range of stakeholders from various sectors involved in environmental management in Latvia³. The results of the workshop and recommendations were incorporated into an action plan, which was then further developed and approved by key stakeholders.

The *action plan approval* was one of the most difficult steps in the NCSA process. Due to the thoroughness of the consultation process throughout the NCSA project implementation, a great number of the actions proposed within the NCSA action plan were mainstreamed into the actions and strategies of specific long-term sectoral programmes. As strongly noted by representatives of the State Chancellery during the validation workshop and agreed by all participating, it would be more productive to integrate the actions of the NCSA process into existing strategic documents regulated by legislation and governmental decrees, rather than to prepare a completely separate plan. Thus, the action plan was developed to incorporate references to the strategies into which NCSA actions are mainstreamed.

The action plan was presented to four inter-ministerial councils, which approved the plan and adopted sections of the plan pertaining to their mandate for action and monitoring. These inter-ministerial councils cover all the different facets of the action plan recommendations and this method uses existing inter-disciplinary bodies take advantage of the opportunity for synergies and accountability among parties in a sustainable environment beyond the project lifetime. Although there will also be a formal monitoring and evaluation, the use of these councils provides an existing setting for public monitoring of the NCSA results long-term. The councils which have reviewed and approved the action plan include:

Council for Environmental Education and Science (Representatives from the University of Latvia, Ministry of Environment, Ministry for Education and Science, Ministry for Regional Development and Local Governments, Latvia University of Agriculture, Rezekne University, Riga Technical University, Latvia Academy of Sciences, Daugavpils University, Liepāja Pedagogical Academy).

Consultative Council of NGOs (Representatives from NGO “Zaļā Brīvība”, NGO “Latvian Environmental Fund”, NGO “Latvijas ornitoloģijas biedrība”, NGO “Vides aizsardzības klubs”, NGO “Par tīru Daugavu”, NGO “Baltijas Vides forums”, NGO “Latvijas Bioloģiskās Lauksaimniecības organizāciju apvienība”, NGO “Latvijas Ekotūrisma savienība”, NGO “Zaļā punkta klubs”, NGO “Latvijas Elektrotehnikas un elektronikas rūpniecības asociācija”, Latvia Academy of Sciences, University of Latvia, Professional NGO “Latvijas iepakojumu asociācija”, Professional NGO “Ķīmijas un framācijas uzņēmumu asociācija”, Latvia Country Tourism Association “Lauku ceļotājs”, Professional NGO “Latvijas Atkritumu saimniecības uzņēmumu asociācija, Ministry of Environment).

Council of Land and Environmental Protection Issues (Ministry of Environment, Latvia University for Agriculture, Latvian Centre for Country Development and Education, AgroChemicals Research Centre, State Plants Protection Service, Latvian Society of Municipalities, WWF Latvia, Latvian Nature Fund, Latvian Environment, Geology and Hidrometeorology Agency, Cooperation Council for Agricultural Organisations, Saeima of Farmers.)

³ The validation workshop assembled representatives from the following: UNDP, Ministries of Environment, Welfare, Education, Regional Development and Local Governments, Agriculture, Health, Foreign Affairs and Transport and Communications; Rīga Technical University, State Chancellery, State Land Service, State Forest Service, Rīga Environment Centre “Agenda 21”, Administration of Ķemeri National Park, Municipalities of Liepāja, Rīga, Jelgava, Nature Protection Board, Latvia society of Free Trade-unions, Latvian Environment, Geology and Hidrometeorology Agency, Teiči Conservancy Area, Administration of Ziemeļvidzeme Biosphere Conservancy area, Central Statistics Board, Protected estate State Agency, independent consultants.

Council of Sustainable Development (Representatives from Ministry for Defence, Ministry of Foreign Affairs, Ministry of Economics, Ministry for Culture, Ministry for Health, Ministry for Welfare, Ministry for Justice, Ministry for Regional Development and Local Governments, Ministry of Agriculture, Ministry for Education and Science, Ministry of Environment, Latvia Society of Municipalities, Latvia Free Society or trade-unions, Confederation of Latvia employers, The Council Of Latvia rectors, Latvia Academy of Sciences, Latvia association of Regional Universities, Environment protection organisation.

All these councils are permanent bodies which meet at least once every quarter.

After a period of 9-12 months upon completing the NCSA, a follow up workshop will be conducted where the main parties and responsible authorities will report on capacity building progress and implementation of the recommendations contained in the NCSA action plan.

1.1.3. Sub-regional workshops

During the course of NCSA implementation in Latvia four sub-regional seminars were organized:

- i. Technical Workshop on NCSA Implementation for Eastern Europe and the Central Asian Republics, 28-30 May 2003 (Bratislava, Slovakia)
- ii. NCSA Sub-Regional Workshop for EU Accession and Pre Accession Countries, 29 March – 1 April 2004 (Bratislava, Slovakia)
- iii. NCSA Regional Workshop for Europe and CIS, 27-29 September 2004 (Bratislava, Slovakia)
- iv. Regional Workshop on National Capacity Self-Assessment in CEE and NIS, 25-27 November 2004 (Isle of Vilm, Germany)

The sub-regional workshops contributed to the NCSA process a lot. Since the notion of capacity self-assessment across the three thematic conventions was a novelty, the workshops provided a forum for the project team to meet and exchange experiences with other colleagues working in the same process in other countries. The regularity of the meetings provided a sound framework stimulating a regular documentation of project progress. The workshops also provided hands-on information on the use of tools, different methodologies and approaches in the course of the NCSA with concrete lessons learned from other countries. This contributed to improving the quality of the NCSA on the national level in Latvia.

The NCSA Sub-Regional Workshop for EU Accession and Pre-Accession Countries, which was attended by the GEF Operational Focal Point and Environmental focal point to the European Union from Latvia was instrumental in providing first-hand information to the main government stakeholders on the NCSA processes globally. The EU-perspective on the process increased buy-in from the government and opportunities for the inter-connection between the requirements of the UN conventions and EU directives became more apparent (Annex 5: EU structural adjustment / NCSA synergies matrix).

1.2. General discussions of the Methodological Approach

1.2.1. Main principles and approaches

Self-assessment is a complicated and challenging task in terms of the human ability to be self-critical. To be most effective the criticism that emerges from such a process must be constructive and honest. Most importantly such criticism must be presented and perceived as an opportunity for self-improvement rather than as an offence or an attack. This was a delicate balance that had to be maintained throughout the process and often necessitated more time-consuming and cautious approach to implementation.

Although the process of capacity assessment is a rather sensitive activity it must be open, fair, objective and endorsed by the entire range of stakeholders. Therefore prior to broadly communicating capacity issues as unresolved problems, they need to be validated and correctly formulated different types and levels of stakeholders. The process can be cumbersome but vital for credibility of the results.

The NCSA took an innovative way look at different capacity constraints in relation to implementation of three conventions that are laying in responsibility of different ministries and agencies and the correlation between different themes of environment and nature protection, which was not common in Latvia. While the three thematic conventions each are still covering a separate sector of environment, the NCSA was designed to uncover cross-cutting aspects of capacities. Therefore, synergistic actions should be taken in order to address the capacity constraints through the strategic application of limited resources. Basically this resulted in two ways of interference: first is identifying overlapping tasks and managing them in a way that doing a particular activity once is satisfactory and appropriate for all three areas. Second is trying to address the issues that cut across more than a one area. For this reason in terms of project boundaries it is obvious to speak about the entire environment and nature protection field.

1.2.2. Techniques and logistics

The methodology and techniques used during the course of the NCSA in Latvia was based on GEF - UNITAR Guide (2001) and UNDP Manual (2003). The Project was structured in a way that information was analyzed starting from the broadest ranging down to the most detailed, deepest issues.

During the regional seminars in Latvia the discussions on the thematic assessments

*Abbrev.: BD – biodiversity, CC - climate change, LD - land degradation.

Capacity problem	Causes of the problem	Suggestions for capacity building	Capacity building options	Applicable conventions		
				BD	CC	LD
People do not follow the environmental protection recommendations in their daily activities (V)	The society lacks understanding of the significance of the preservation of biological diversity and natural processes (L, K) People are not aware of the unique character of Latvia's nature (R)	Creation of Environmental information centre / centres (K, R, C) Municipal specialists providing information and showing good practice to people (V, L, R, Z) Nation-wide programme for informing people in the field of environment (Z) Measures for encouraging observation of environmental requirements (K, Z) Publishing of popular scientific illustrated manual on biological diversity in Latvia (K) Informing society on the impact of climate change in Latvia, its causes and actions to be taken to manage this process (V, K, R)	Informal education options (K) Useful information can be found in mass media, especially in dedicated environmental media (K) The press is interested in topical scientific information (V)	X	X	X

The NCSA was based on data compiled by consultants and further validated by key stakeholders. This created a balance between the theoretical or academic and the practical – a more distanced, objective view and a more operational, subjective view (in this sense not putting a qualitative measure on subjectivity). The results of the broader, public discussions on the ground were then aggregated and brought to the table for discussion at the higher policy level. At different stages there were different consultants engaged in the process. The consultants, as individuals represented a group of stakeholders (academic, NGO, governmental, private) which undoubtedly also had an effect on the process and results. The NCSA in Latvia also involved two international consultants at two different stages of the NCSA (initial and final stage). The consultants usually formed a task force and were responsible for processing and packaging the information provided for by the stakeholders and for the generation of ideas on next steps.

1.2.3. Main challenges

Early in the course of the NCSA, the results of the project began to take shape in two streams: processes and products. Both of these results are important and require innovation, efforts, set of

targets and proper management in order to achieve them. And both turned out to be complicated and challenging.

This chapter looks at the main challenges and circumstances described that can provide some insight into the NCSA in Latvia.

1.2.3.1 Process

Issues:

- Ensuring ownership and endorsement of the process with little concrete and tangible return within the NCSA;
- Balance between formal and informal networking and communication;
- Finding the optimal level of analysis without producing fatigue;
- Balance between capacity gaps/constraints and strengths/achievements.

Projects such as the NCSA are difficult to implement due to very few visible and tactile results for the participants. The process depends on the involvement and commitment of stakeholders with little to give in return. Some capacity constraints are identified as important by stakeholders, but the confidence that they will be tackled at the higher-level is low. Thus, a very great deal of the efforts of the project personnel, experts and involved parties is devoted to obtaining and sustaining the approval of the NCSA process and its outputs.

The way of establishing ownership of the NCSA, formally, is clear and well-defined in Latvia. Each Convention has a focal point in the Ministry of Environment (MoE) and 'natural' partners/stakeholders in environmental NGOs, academic institutions, etc. The trouble starts with issues that cut across several authorities. Since distribution of responsibility between the ministries traditionally has been a problem, this also reflected on the project endorsement. While separate components of the Action plan theoretically fall into the field of responsibility of a couple of authorities, still there is a doubt about practical scope of division. In order to ensure response and actions reflecting the recommendations, taking into consideration the importance of mainstreaming such recommendation for actions are desirable to be mainstreamed, kind of lobbying strategy with strong sense of division objectives should be implemented.

Once formal ownership is set through establishment of project implementation, coordination and advisory mechanisms, it is important to maintain this ownership through more informal channels: updates on the process, individual meetings where necessary, intense work of the project coordination team to keep lines of communication with convention focal points and other main players. We have found that formal communication channels often overburden the persons involved. (Give an example.) Informal communication, although more time consuming allows more open and frank discussions, is a more pleasant part of the process and often leads to more innovative ideas.

Before the launch of the NCSA in Latvia there had already been many assessment of capacity conducted in the field of the environment, and in the area of the three conventions, specifically (including two UNDP/GEF enabling activities on biodiversity). Thus it was important to begin with a stocktaking of what has already been done to avoid duplication and to fix the results of previous assessments conducted.

Inevitably the NCSA process lead to a discussion more about problems and neglects to stress those issues that are well-covered by the country and specifically the 'responsible parties' for the Convention in the Government. Thus the process can become (or become perceived as) a criticism of individuals and institutions. During this process in Latvia we felt it important to

juxtapose capacity constraints in the conventions with capacity strengths. For this reason it is also important to keep the process as open and transparent as possible.

1.2.3.2. Products

Issues:

- Establishing clarity about and common understanding of the NCSA terminology (capacity, self-assessment, synergies, cross-cutting issues, cross cutting capacity needs, etc);
- Human resources and availability of expertise to contribute to NCSA;
- None of the thematic areas are a national-level environmental priority;
- Complexity of prioritization exercise;
- Facilitating the cross-cutting aspect of environmental management;
- Bringing the various interests of various stakeholders to the cross-cutting exercise.
- Validation and quality control of the action plan

The concept of the NCSA is innovative and the title of the initiative is difficult. Thus an important element to assist stakeholders in understanding the purpose and the results expected is to provide a 'short title' of what the NCSA really involves. In Latvia it was also helpful to define what is meant by 'capacity', 'self-assessment', 'priority setting'. To policy makers these terms and their translation into Latvian seem self-evident, but at the local level there were difficulties in grasping these ideas. To facilitate stakeholder involvement and increase quality of input and support to the NCSA, it is important to make sure everyone is clear on the terms and their translation.

One of the first and foremost constraints regarding capacity is the limitation of human resources. This issue already appeared very clearly during the NCSA orientation session that took place December 2001. This constraint puts very strong limitations on the NCSA process itself. On one hand we recognize that only local experts can provide input to the process, but on the other hand this same pool of individual's time is restricted. Thus it is easy to create a fatigue amongst sector specialists on discussions surrounding the NCSA. This becomes an even bigger problem during validation as validation should be achieved at a higher level, however one does not want to overburden this level with detail.

The prioritization process itself requires putting one convention up against another. This is a complex task as each individual/institution finds it difficult to rate its priority lower than the other 'sector'. It is important to agree on a prioritization methodology. There are so many weighting criteria to take into account (relevance to national policies/priorities, need for progress in the area, national contentment as compared internationally, coverage by EU legislation, importance of issue to the various stakeholders, lack of (and need to strengthen) capacity at the various levels of stakeholder), that it is difficult to find the optimal technique without overburdening the objectivity and results of the process.

The project achievements include gathering a wide-range audience to discuss the constraints of environmental management and providing a forum to promote and facilitate a cross-sectorial approach to environmental issues. Through the NCSA, some concrete capacity needs have already arisen with possible solutions, which could be covered as demonstrations or additional research during the project. These include the need for a common database on national environmental experts and multi-faceted experts (socio-economic, environment law, etc). The fact that such clear solutions are identified and developed at early stages of the NCSA helps to validate the importance of the process and heighten the interests of stakeholders in the outcome.

Nevertheless the main stakeholders would be on the board, the results of NCSA will be hard to bring to the attention of the country's highest-level policy makers since none of these thematic areas (biodiversity, climate change, land degradation) is a national level environmental priority in Latvia.

Successful introducing of the concept of prioritizations is the achievement itself since the needs are always greater than the resources. It is common for stakeholders to create wish lists rather than identify true priorities. It is always important to clarify what one expects as the product at any given stage. The facilitation of the process needs to be clear and stringent to keep this end goal in site and to keep the process set on the target.

During the preparation of thematic profiles it was concluded that many issues from the three conventions interact with one another. Thus a focus on cross-cutting issues became important at a very early stage. In the regional priority setting workshops, the work sessions were organized to look at the conventions under four themes – information and data, education and science, funds and financial tools, environmental policy. This focal area split of working groups facilitated drawing out cross-cutting aspects in the priority setting process. The participants considered and drew witness to shared capacity constraints and strengths across the three conventions, rather than limited to one. This approach was beneficial for identifying cross-cutting issues at an early stage and it appears, that did not compromise process in general.

One of the most important aspects of the NCSA was the involvement of a broad number of stakeholders, but this also makes it difficult to reach agreements on the main priorities. There are many different interests and points of view that run contrary and in opposition to one another. This, and the fact that the ultimate 'ownership' of the project is at the Government level presents difficulties during the process, both in validating the importance of one or another 'capacity constraint' and in gaining support (or an open, objective discussion).

The main product to be produced by the NCSA in Latvia is an action plan which requires approval and validation by the various stakeholders. Due to the length of the process, it is natural to want to achieve the best possible results in terms of a clear, well-defined, supported and broadly accepted action plan. However an overly pedantic approach to this action plan and its formal approval by the widest range of stakeholders can stretch the process of approval beyond any sensible deadlines. There is a certain consensus among, and feedback to, the involved stakeholders required and advisable for creating a qualitative result. The tasks to achieve this consensus, however take a lot of deliberation, review and discussions. With each change by one stakeholder in the formulation there is a risk to need to complete another round of approval, which can make the NCSA development endless. Thus, at the final stages it is vital to have a strategic, recognized and respected leader guiding the approval process.

1.3. Stages of implementation

1.3.1. Initiation and preparation

In a broader sense, the NCSA project consists of research and organizational-administrative components. From the administrative point-of-view the project was initiated in the end of 2002, however the research began in April of 2003 with the introductory seminar (held on 11 April 2003 in Igate Castle). All the necessary organizational tasks were conducted in the period between the inception of the project and the beginning of the research, which is due to necessary arrangements concerning the competence and work of institutions, elaboration of work tasks, personnel selection and establishing of consulting work groups. The preparation phase involved also bulky work on development of the precise research subject, methodology and progress.

1.3.2. Stocktaking and preparation of the thematic assessments

The first part of the NCSA process in Latvia was the stocktaking exercise, which was organized by developing a report on the capacity constraints. There were four experts who drafted the report – one expert for each convention and the fourth one dealing with legal issues – the conformity of Latvian legislation to the three conventions.

Based on the findings of the desk study, a series of interviews were conducted. Different opinions and clarifications were included in the thematic profiles. The profiles tried to avoid giving any conclusions or recommendations but held to defining the way the things stand in the respective thematic area.

The Thematic profiles included opinion of more than 120 stakeholders (see Annex 1). On some topics, there were opposing views among the stakeholders were opposite and thus a lot of effort was required to obtain endorsement and trust. Nevertheless, one of the main principles during the compilation of the opinions was the equity of every stakeholder view, the data still had to be validated in order to exclude objectively false information. Yet the consultants had to consider and analyze reasons why stakeholders operate with the respective false data and if it is a capacity issue.

Finally the Thematic profiles included stakeholder analysis, institutional definitions, capacity issues, capacity strengths and constraints.

1.3.3. Priority setting

Priority setting in itself is a very sensitive which is neither straightforward nor scientific. The results of such a process depend on the how informed, objective and engaged the people conducting the prioritization are. Partially, the criteria used to rank the priorities also have a direct influence on the results of the prioritization process. Nonetheless taking into account the broad range of topics and concerns that the thematic conventions cover, assembling individuals that would be equally informed, objective and engaged on all conventions is almost impossible. Thus, the subject of concern is to develop priorities that represent needs of the majority and are endorsed by decision makers, as well as those who will have to implement the decisions.

The next stage of the NCSA then was priority setting process that started with five regional seminars. Conducted throughout Latvia, these seminars were a tool for getting a large number of stakeholders that usually would be left without a say, on-board. Findings of the thematic assessment report were reviewed at the seminar and priorities were set at the regional level, which involved local NGOs, environmental management-related institutions and businesses. (Annex 6: Example of Regional Seminar Agenda)

The step following the regional-level seminars was a high-level priority-setting seminar in early February with the involvement of representatives from the relevant ministries (see Annex 7: List of High-level priority-setting seminar representatives) The high-level priority setting exercise was conducted using the capacity constraints identified through the thematic reports and regional priority setting exercise as a basis. The representatives assembled at this seminar set 17 priorities out of about 300 identified capacities.

After the high-level priority setting seminar, the Project went on by establishing a consultant team consisting out of one national and one international consultant. In order to set impetus for the action planning, assessment team has reformulated all 17 priorities identified in the final workshop as capacity constraints. Due to significance of UNCCD, three additional priorities emerged from the thematic profiles validated both, informally (by NFP of conventions and other experts in related field) and formally (by Project steering Committee). Those were added to the set of priorities. Final twenty priority capacity constraints include two related to the CBD, two related to the UNFCCC, four related to UNCCD and 12 cross-cutting constraints, which relate to all conventions (Annex 8: Revised Final Priorities).

1.3.4. In-depth analysis

Upon completion of the priority-setting exercises it was important to undertake an in-depth analysis of all 20 priority capacity constraints to provide sound understanding about nature of the needs/constraints by identifying all the layers (individual, institutional and systemic) of underlying causes, the contributing factors and the key barriers to effectively addressing them.

The 20 issues were structured into thematic areas and four consultants were contracted to examine those issues and prepare the analyses.

1.3.5. Validation and preparation of the action plan

After finalizing of in-depth analyses those had to be validated and endorsed by stakeholders. And the validation also had to be the platform for agreeing on recommended actions.

A day-and-half NCSA Validation/Action Planning workshop was held outside Riga in Sigulda. The workshop was attended by an excellent cross-section of stakeholders (mainly from the public sector) and was opened by the Minister of the Environment.

The contracted in-depth analyses consultants were asked to present developed recommendations and proposed actions and those were validated and discussed over in the working group sessions.

1.3.6. Outcomes

Validation process indicated the best approaches (i.e., actions) how to address priority capacity constraints and contradiction points of different agencies that needs particular attention.

Similar to the challenges, also outcomes should be appraised in two ways: principal products and process benefits. Taking into consideration that components of capacity also are awareness, involvement, knowledge and ability to communicate, the NCSA Latvia process has proved beneficial in that sense. While those are not apparently concrete outcomes, however they should not be considered as less important.

1.3.7. Principal Outputs

- Stocktaking, Thematic assessment report, In-depth analyses;
- Action plan;
- Table highlighting EU fund availability in the field of environmental management (2004-2006)
- Project proposal to UNDP/GEF on Building Sustainable Capacity and Ownership to Implement UNCCD objectives in Latvia;
- Project proposal to UNDP/GEF on Developing Capacities in Education and Research for Strengthening Global Environmental Management in Latvia

Stocktaking and Thematic assessment reports include a large amount of information and data about the thematic areas. The boundaries of the topic are set across the three thematic areas – biodiversity, climate change and land degradation and their intersection (including cross-cutting analyses). For 20 issues, which were nominated as priorities, a detailed examination is available and summary is included in the Synthesis report. This is an entire resource with sound analyses of particular problematic.

Those materials (thematic profiles, in-depth analyses, synthesis report) are source that can be used in for education process, other projects, research as well as an argument for initiating certain activities, requesting funding or bringing the issues to agenda.

The Synthesis report also includes Action plan, which is sort of compilation of recommendations made through in-depth analyses and validation workshop. The plan consists of recommendations of best way to clear the hurdles and barriers in order to eliminate capacity constraint causes. From legal point of view the Action plan itself will not be compulsory. It will provide know – how for practitioners of planning and strategy makers in respective thematic areas and environmental sector as such. This will be a task of the Project team to obtain endorsement and ensure mainstreaming of respective recommendations.

In mid-2004, a table was generated and disseminated which listed priorities, measures and activities concerning environmental issues, which will be co-financed by EU Structural Funds (see Annex 5: EU structural adjustment). The table lists potential linkages and synergies between the NCSA and the EU structural adjustments processes that provide important information in identifying possible resource mobilisation avenues, which could potentially be applied in resolving the environmental capacity constraints. This is especially important due to a frequent argument during the NCSA process that there was a lack of funds to address the issues raised. This table in fact indicated that there is merely an insufficient knowledge and creativity applied to tap available resources in project development.

One of tactile outcomes is a succeeding initiation of project on Land degradation issues. As UNCCD is the least implemented out of three thematic conventions, and findings of thematic

assessment indicated necessity of operative intervention, the project proposal was drafted and submitted to UNDP and GEF.

The main objective of the project is to create sustainable capacity and ownership in Latvia to meet the country's obligations under the UNCCD. The main purpose of the project is capacity building and removal of key barriers to sustainable land management in Latvia.

The project was approved by the GEF in mid-2005 and is expected to achieve the following outcomes:

1. National land policy rationalized and sustainable land management mainstreamed into the policy and regulatory framework;
2. Local capacities built to adopt sustainable land management practice in the selected areas;
3. Improved knowledge and technical capacities for sustainable land management in Latvia.

Another concrete NCSA outcome is the elaboration of a project initiation document to develop a medium-size project proposal in the field of environmental education and research. The project outcomes plan to include the following: i) global environmental issues and provisions of the three Conventions are adequately mainstreamed into the reformed environmental education and research system; ii) individual capacities built by improved skills and knowledge and country's training capacity; iii) awareness of the key decision makers raised on the relevance and practical means to address the provisions of the Conventions. Project proposal was submitted and the implementation stage has been started in the end of 2005.

1.3.8. Process benefits

As noted in the outcome evaluation of the energy and environment portfolio in Latvia, which was conducted in mid-2004 "The NCSA is arguably a project in which the process is as important as the actual outputs since it is in discussing capacity needs, and in attempting to prioritise needs, that the views of people from many, possibly conflicting, backgrounds can be heard and understanding increased."⁴ The particular process benefits identified in the NCSA process in Latvia include:

- Involvement of stakeholders on all levels and from various sectors;
- Awareness raising;
- Capacity-building of project personnel, consultants and stakeholders;
- Assessments from NCSA used for various reports and analyses conducted in the area of environment;
- Attitude changes.

Although it is difficult to determine all the impact the NCSA process has had in the development and analyses in the environmental sector due to the fact that sources are not always identified or recognized, it is clear that the materials and information generated during the NCSA process has been, and continues to be, used in non-NCSA specific activities. For example, the results of the NCSA were used to complete section in Latvia's 3rd National Report to the CBD, also in re-organising the structure of the Ministry of Environment (during the course of the NCSA a new department on Climate Change and Renewable Energy was established and the organization of environmental protection department was adjusted).

The NCSA approach anticipates publicity, discussions and involvement as described in chapter Main principles and approaches. While it is complicated to set boundaries between stakeholders and non-stakeholders of NCSA and, therefore to name a precise number of stakeholders, still it is

⁴ Energy and Environment Outcome Evaluation in Latvia, Eco (UK) Grupa 93 (Latvia); July 2004

possible to estimate an approximate volume of involvement. In the process of stocktaking and development of thematic assessments there were about 120 primary involved stakeholders (stakeholder is a person, entity or a party as well, who has some interest, influence or say regarding a particular issue). Regional workshops extended this amount for about 300 including those who were at least briefed about process and main findings of NCSA. Process of in-depth analyses and validation workshop added 60 new stakeholders to the range of participants. This makes 480 primary NCSA participants. However there could be variations as some of them all are no longer in place.

Stakeholder involvement was not just informing and questionnaire, the process and workshops in particular was like a tool that brought together stakeholders who would not usually meet each other and facilitated discussion about issues that cut across.

No doubt that every seminar and discussion has an awareness raising impact. NCSA Latvia had seminars and workshops:

- Inception workshop (April 2003);
- 5 Regional workshops (Autumn 2003);
- Final priority setting workshop (January 2004);
- Training on SPNT's and Environmental Impact Assessment procedures;
- 3 workshops about specially protected biotopes;
- 4 workshops on emission trading;
- Validation workshop (November 15 – 16, 2004).

We can also speak about capacity building in terms of explaining understanding of the issue, knowledge about thematic subjects and awareness of environmental management issues. Also the project personnel, management and consultants have obtained a great experience and skills in the thematic fields as well as about self- assessment aspects.

During the course of the various activities and discussions conducted under the NCSA project there have been several changes in attitudes towards strategic planning and innovation that have evolved. These include a heightened sensibility of stakeholders to the necessity (and benefits) of mainstreaming and cross-cutting issues which improves the resource use and mobilization in a combined way. As the NCSA action planning process showed through example how many actions can be taken that required little or no financial resources, the optimism of stakeholders that solutions could be found increased. The broad and interactive discussions conducted during the NCSA stimulated a more creative and innovative approach to drafting solutions for results to achieve mutual benefits for a broader combination of parties.

Other process benefits include:

- i. Increase in interministerial and cross-sectoral coordination;
- ii. Identification of strong linkages between capacity constraints which limit both the implementation of UN conventions and EU directives (this had the dual effect of increasing buy-in from the Government)
- iii. Raised awareness on linking external (and national budget) funding to achieve common objectives for increased and more sustainable impact
- iv. Increased coordination among experts (NGO and academia).

II Summary of the Thematic profiles

2.1. Overview on current situation on the implementation of Conventions

Preparation of the Thematic profiles began in March 2003 and was completed in August of the same year. The exercise was led by four consultants each dealing with one of three thematic convention issues. In addition, it was determined that a special profile focused specifically on legal issues was necessary.

Altogether 122 persons were interviewed – 16 of them have contributed to several thematic chapters of the report (41, 34, 35, and 28 persons, respectively, in thematic chapters on biodiversity, climate change, land degradation, and legal matters). In addition, an extensive amount of literature, completed and on-going projects and sociologic questionnaires were studied prior to define the capacity problems.

By the end of the thematic assessments, 64 capacity constraints had been identified – 13 related to biodiversity conservation, 15 in the climate change area, 30 related to related to land degradation, and 6 emerged from analysis of legal issues. Approximately one third of the identified capacity problems in each thematic chapter obviously cut across the conventions. In particular, insufficient availability of various resources was identified repeatedly, quality of work of executing institutions, data availability and compliance, education and science, including participation of society and a dialogue with non-governmental organizations.

Differing understandings and perceptions by key decision-makers of the comparative importance and relevance of the three conventions have lead to markedly different level of implementation. The most successfully implemented convention is Convention “On Biological Diversity” that was positively influenced by the current process of harmonizing the Latvian legislative framework with relevant EU Directives. Next in terms of successful implementation is the convention “On Climate Change”.

In comparison with the above conventions, which Latvia joined in 1995, the current status of implementation of the UNCCD is significantly different, mainly because Latvia only joined the agreement at the end of 2002. It remains unclear which particular institutions will be involved and how their role and competence will be spread amongst them. This situation made somewhat difficult to evaluate the current capacity situation with a high degree of certainty and relevance. However, as a result of this study, all possible documentation, relevant projects and research have been summarized, including consultations with stakeholders to ensure wide range of opinions and build-up of something like an ‘informative platform’, which can serve to solve the identified capacity problems at later stages of the project.

2.1.1. General situation in Latvia concerning the introduction of Convention “On Biological diversity”

In 1995 Latvia signed Rio-de-Janeiro Convention from 1992 “On Biological diversity”. This convention obliges its members to develop or adapt national activities both in legal and practical sense for preservation of Biological diversity, use of resources by not over-exploiting them, including implementation of defined duties for cross-sector co-operation. The convention is the higher supervising document, and to implement it other documents and strategies are adopted; the most binding strategy for Latvia is EU “Biological diversity Strategy”, which was adopted in 1997 and prescribes implementation of measures in EU countries, and Latvia will join EU in May 2004.

Latvia has adopted the most essential general laws, which ensure implementation of the convention: laws on kinds and biotopes, woods, hunting, fishery, shelterbelts, impact on environment evaluation, etc. The dominant opinion amongst environment specialists in Latvia is

that the existing legal framework governing implementation of convention “On Biological diversity” is sufficient. Legislation issues in more detail are described in the legal expert’s report provided in the overall part of the project.

Among the most essential normative and administrative activities, which are already accomplished in Latvia are the following:

Ratification of other global conventions essential for preservation of Biological diversity (egg. Berne, Bon Ramsar, Washington – CITES);

Developed national program for protection of Biological diversity (accepted on May16, 2000);

Developed the second national report on Biological diversity (in 2002);

Created national environment monitoring program (in 2002);

National legislation defines protection of kinds, biotope, forests and conservation territories (see chapter 1 Legal Report);

Exists CHM – “clearing-house” mechanism (information and co-operation network);

Established and active institutional structures, which manage and supervise implementation of the convention;

Essential effect upon positive development of the process is because of harmonizing mechanism between legislation and requirements with EU Directives.

The mentioned documents or activities are formally supplemented with action plans, which include single or annual (regular) action to perform.

Since Latvia joined the convention it has implemented or is in the midst of implementing a range of projects and activities designed to adjust particular environment sectors or cross-sector relations connected with the convention:

Inventory of kinds and biotope, including increase of legal capacity in staff training – “Inventory of Kinds and biotope, development of protection plans and development of nature preservation structures in Latvia connection with EU bird and biotope Directive transposition” (among them a new study book was publish – Biotope Manual) (1998 –2000);

Development of network of kinds and biotope according to EU – “Co-ordination of system of special protection nature territories in Latvia with EMERALD / Natura 2000 requirements” (2001-2003; currentl (August, 2003) the projects is in its final stage);

Inventory of biologically essential forest sectors within the State Forestry system (State Forestry Service, State Joint Stock Company “Latvijas valsts meži” (“Latvia’s State Forests”) project “Wood Key Biotope Project”) (includes a published study book – Wood Key Biotope Manual) (1999-2002);

Project for institution development and qualification training, including implementation of approved programs – Introduction of National Program for Biological diversity” (DANCEE / CarlBro project); currently (August, 2003) is continuing within its final stage)

Several UNDP and GEF funded projects on:

Support of development of resources, information and co-operation network (CHM – clearing –house mechanism) for facilitating Biological diversity (LAT/01/G31/A/1G/99); within the project framework pay attention also to monitoring issues and motivation mechanisms for protection of Biological diversity in La (separate part of it are already completed in 2002 and in the early 2003);

Protection of Biological diversity in Ziemeļvidzeme (North Vidzeme) Biosphere Reserve (LAT/02/G41/1G/ – project continues in 2003).

2.1.2. Implementation of the Framework Convention on Climate Change in Latvia

UN Framework Convention on Climate Change is an agreement which focuses on stabilising concentrations of greenhouse gas ‘in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system’ and to commit signatories to decreasing of

greenhouse effect gases (GEG) emissions to 1990 levels by the year 2000.. The Convention has two annexes: “I. Countries which have liabilities towards stabilising of the mentioned emissions” and “II. Countries which undertake to provide funding for measures taken to decrease the level of emissions. Latvia has signed UNO General Convention on Climate change (hereinafter-Convention) in 1992 in Rio de Janeiro at UNO conference “On Environment and Development”. The Parliament of the Republic of Latvia ratified the General convention on Climate change (Convention) in 1995 thus becoming a convention member state and taking up the responsibility to fulfil international obligations.

The Convention originally required developed country signatories to stabilise GEG emissions at 1990 levels by the year 2000. In 1997, however, the Convention was supplemented with the Kyoto protocol (Protocol), which Latvia ratified on 30 May 2002. The Protocol prescribes that during the period of time from 2008 to 2012 GEG worldwide emissions should be reduced by 5% if compared with year 1990. Latvia must reduce its total emissions by 8% if compared with year 1990.

The Protocol foresees three flexible mechanisms with the help of which member states can implement their obligations on mitigation of emissions – collectively implementing projects (JI), international emission trade (IET) and mechanism for free development (MFD). It is forecasted that during the next 20 years Latvia will not reach the level of GEG emissions and conjunctions to the level of year 1990, therefore Latvia within the JI and IET framework will have the possibility to sell its unused sink and reservoir permits to other states mentioned in Appendix 1 of the Convention. The protocol also foresees to commence sale of international emissions starting from 2008. There is an external risk that the Protocol will not take effect till the year 2012. However, European Commission (EC) has set up a directive project on trade of GEG emissions (Proposal to EU Parliament and Council Directive 2001/0245 (COD)) that foresees to start trade with GEG emissions within EU already from January 1, 2005.

For the EU member states introduction of the Protocol is collaterally binding as to the decision of the Council of Europe No. 2002/358/EC of 25 April, 2002 on ratification of the Protocol. EU has developed “European Programme on Climate change” (2002), “Action Plan for improvement of energy efficiency” (2000), in March 2000 EC adopted the “Green Document” on trade of GEG emissions in EU. For Latvia as for a candidate country it is important to follow the actualities of EU policy on Climate change decrease, and after joining EU Latvia will have to adopt the mentioned directives. In addition, Latvia has developed a document for implementation of the Convention called “Policy plan on Climate change decrease for Latvia” which is under the supervision of Ministry of Environment. In 2002 the Cabinet of Ministers of the Republic of Latvia adopted the strategy of commonly implementing projects provided in Kyoto protocol (for the year 2002-2012).

There are several political documents for implementation of the Convention, as well as several political documents dealing with the issues concerning the implementation of convention on Climate change. In 1995 plan for the Environmental protection policy for Latvia was introduced – the basic document for all activities in the environmental sector. It must be said, that problems of climate change in the Environment protection policy plan are not included in the environmental priority list.

In 2002 the Cabinet of Ministers adopted the guidelines for sustainable development of Latvia in which one of the aims is to provide the input of Latvia in global climate change prevention in a manner that does not impede the economic growth of the country. In the Environment Communication and Education Strategy 1998-2000 as well as the Environment Communication and Education Programme of Action was worked out that aim at securing social awareness and creating understanding about environmental regularity, processes, problems and their methods of solution, also about activities causing global climate change as well as about facilitating co-operation of various social groups in issues concerning environmental decision making and

development of environmentally friendly social awareness. Some issues that deal with climate change mitigation are integrated in political documents of respective industries (Energy, transportation, waste management, industry, forestry and agriculture).

Policy of environmental protection in Latvia is implemented by the Ministry of Environment of the Republic of Latvia and institutions under its supervision and subordination in co-operation with Ministries and institutions of respective sectors. Unfortunately, there are no strong non-governmental organisations that could actively take part in influencing or shaping national climate change policy and ensuring social information process on issues concerning Climate change. Especially significant support for implementation of the Climate convention is the project “Implementation of international conventional obligations in air protection” that was initiated in year 2000, and which ensures creation of political documentation and co-ordinates the development of the research.

Different sectors implement various projects that influence Climate change (see Annex XIV). So far 27 JI pilots have been implemented in Latvia, that have given contribution not only to the mitigation of GEG emissions, but also have ensured acquisition of experience for further successful participation in JI implementation

2.1.3. Implementation of United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (hereinafter – the Convention) was adopted in Paris on June 17, 1994 and entered into force as of December 26, 1996. In January 2002 it was signed by 178 countries and European Union. Convention has five regional implementation annexes where I addresses Africa, II – Asia, III – Latin America and the Caribbean basin, IV – Mediterranean, V – Central and Eastern Europe.

The term “Land degradation” was adopted by the conference of the parties to the convention later as the majority of signatory countries are not affected by desertification; however land degradation of one kind or another is a common problem.

One of the main objectives behind Latvia joining the convention was a summon of EU addressed to members and candidates as well to join the convention until Rio+ conference, which took place at Johannesburg at September 2002.

Latvia joined the convention by the law “About United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa”, which was adopted by Saeima (Parliament) in September 26, 2002 and entered into force at 9 October 2002. Translation of the convention and attachments is added to the law.

In the 4th paragraph it is specified that the Ministry of Environment is executable for co-ordinating the implementation of the requirements set by the convention.

Due to recent entering into force, the implementation of the convention in Latvia is at the initial stage.

Meeting of the main stakeholders of particular convention held in Igate Castle on 11 April was like discussion and exchanging views about actual status of implementation of the convention. In the meeting specialists from Ministry of Environment, Ministry of Agriculture, Environmental Agency, Latvian University of Agriculture and State LTD “Vides Projekti” took part as well as members of project implementation group.

During the meeting needs and first steps for Convention implementation were identified. It is necessary to establish inter-ministry work group for implementing the convention. The work group will consist of representatives from Ministry of Environment, Ministry of Agriculture,

Ministry of Economic Affairs, Ministry of Regional Development, and Regional Authority Association and will be co-ordinated by Ministry of Environment.

Latvia has to prepare and submit the first National Report to the Secretariat of the Convention until the end of year 2004. To meet this target, an analysis of convention requirements and assessment of actual situation in Latvia has to be done. It is planned to complete such study by the end of 2003.

2.2. Findings on implementation of conventions

This chapter will in brief reflect listing of problems. The report within the discussed Conventions is divided into five thematic groups (several discussed problems may partly correspond also to other thematic group):

- activity programmes and introduction of technologies;
- science and preparation of specialists;
- information collection, processing, monitoring and information exchange;
- involvement of society, education and co-operation with non-governmental organisations;
- coordination of Convention implementation among institutions and their capacity.

In legal chapter of the report obeying the specific field of research and problem identification and basing on analysis of environmental rights system the identified problems were not divided into thematic groups, but constitute a separate sub-chapter (7.6.). However, problems identified also here relate mainly to information exchange and availability, involvement of the society, including non-governmental organization and co-ordination of Convention implementation among institutions.

2.2.1. Activity programmes and introduction of technologies

2.2.1.1. Problem identified in Biological diversity thematic sector

- (1) unsolved issue of compensation of losses, particularly in forest private properties where the value of specially protected nature territories are under threat. However, at the same time it shall be noted that in legal understanding this issue has been worked with and proposals have been made clear; the main problem is finding of financial resources.

2.2.1.2. Problems identified in Climate Change thematic sector

- (1) national system for preparation of yearly calculations and regular reports about GEG emissions and conjunctions have not been developed;
- (2) lack of quality assessment and quality control system (QA/QC);
- (3) common research programme in field of climate change has not been developed in Latvia;
- (4) Not all companies have enough information on essence of flexible mechanisms and Latvian strategy in their implementation;
- (5) Instruments for motivation of companies to use clean technologies have not been sufficiently developed and introduces in Latvia;

2.2.1.3. Problems identified in Land Degradation thematic sector

- (1) Priorities for Convention implementation have not been set; as a positive activity in this aspect shall be mentioned the research carried out in 2000 by LLU scientists that according to opinions of several interviewed persons is too general and does not ensure sufficient ground for priority definition.
- (2) Lack of common soil research programme;
- (3) Conceptual uncertainty on desirable standards of soil information;
- (4) Priorities for information necessary in future have not been set.

Lack of priority in government and society. However, at the same time this capacity problem has positive counterweight that at the moment the Convention is already ratified in Latvia and therefore it can be expected that in future soil protection will attract more attention. Also the new version of Environment Policy Plan has characterised list of problems related to protection and sustainable use of land and soil resources as well as set policy aims for situation improvement.

2.2.2. Science and preparation of specialists

2.2.2.1. Problems identified in Biological diversity thematic sector

- (1) there is no authoritative (in academic sense) scientific centre dealing with environment protection and Biological diversity issues;
- (2) due to several reasons (funding, lack of staff, inadequate to modern requirements potential) academic science sector in poor condition;
- (3) study process and programmes related to environment issues are hampered by academic staff (lecturers) being overloaded, by rush in implementing the bachelor's study programme and lack of prepared study materials.

2.2.2.2. Problem identified in Climate Change thematic sector

- (1) insufficient scientific research base to be used as ground for information necessary for national reports.

2.2.2.3. Problems identified in Land Degradation thematic sector

- (1) insufficient funding for scientific research work;
- (2) lack of financing for research and recovery of polluted areas; as a positive example here we can mention putting in order of waste management sector which is identified as one of the priorities in Latvian Environment and Environmental investment Policy (Programme 500-).
- (3) Insufficient equipment in universities;
- (4) Limited opportunities for educations. As a positive factor to be mentioned is fact that both LU and LLU offer possibility to study soil science basic courses on bachelor's and master's level, however according to opinions of academic staff the courses ensure only the basic knowledge;
- (5) Specialists are not trained for using of new technologies;
- (6) Lack of opportunities to obtain international experience;
As a positive example we can here mention the willingness of specialists to obtain such experience.

2.2.3. Information acquiring, processing, monitoring and information exchange

2.2.3.1. Problems identified in Biological diversity thematic sector

- (1) in situation when the financing is limited the activities for implementation of national programme for Biological diversity and activities of Environment national Monitoring

Programme have not been prioritised; some respondents see possibility for unfair distribution of funding. Meanwhile positive assessment can be given to the fact that such document has been prepared involving Latvian specialists.

Common principles for gathering of data necessary to the state in Latvian Environment Agency have not been drawn up. Positive assessment can be given to CHM establishment of 'information and co-operation network' which shall be maintained on important level and within which solution of identified capacity problems can be achieved.

2.2.3.2. Problems identified in Climate Change thematic sector

- (1) insufficient co-operation and information circulation among representatives of environment institutions, NGOs, universities and other organisations;
- (2) succession of collection and gathering of necessary data for preparation of National reports is not ensured;
- (3) data-bases are not freely accessible for users and there is lack of information on holders of such data bases.

2.2.3.3. Problems identified in Land Degradation thematic sector

- (1) Databases are located in several state institutions and are not mutually compatible; as a positive aspect here we can mention existence of soil information systematically collected and processed until 1990 and also the competency of specialists working in this field. The competency may at least partly be used in future.
- (2) Part of the information has outdated and does not correspond to actual situation;
- (3) Regular monitoring and data update does not take place;
- (4) Limited access to information;
- (5) Information collected so far does not correspond to international standards;
- (6) Pilot projects for soil information harmonisation with EU are not being implemented;
- (7) Lack of co-ordination during implementation process of projects.

2.2.4. Involvement of the Society, education and co-operation with non-governmental organisations

2.2.4.1. Problems identified in Biological diversity thematic sector

- (1) the level of communication between state institutions and land owners in process of developing of protected territories, explanation of encumbrances and advantages is not sufficient;

In *Natura 2000* meetings organised by Nature Protection Board on co-ordination of territory borders in 2003 several contradictions and discrepancies with landowners were solved and /or explained.

- (2) The interested dialogue between NGOs and formal environment protection institutions, particularly in issues related to national long-term environment policy visions is insufficient;

Positive evaluation can be given to the fact that the dialogue pro forma takes place and institutions usually invite other institutions to participate in events initiated by themselves.

- (3) Insufficient involvement of the society in decision making processes;
In separate cases NGOs in co-operation with mass media have promoted more active participation of the public into solution of environmental issues.

2.2.4.2. Identified problems in Climate Change thematic sector

- (1) there has not been practiced information campaign of national scale on environmental issues, including issues of climate change, programmes;
- (2) there are no powerful NGOs in Latvia which would take active part in explanation of climate change issues and creation of social cognition;
- (3) limited funding for researches and NGO projects related to climate change issues.

2.2.4.3. Identified problems in Land Degradation thematic sector

- (1) The public has little information on soil degradation;

As a positive factor here shall be mentioned the fact that information on soil degradation in Latvian conditions and factors causing such processes is available also in Latvian and in the Internet (for example, "Provisions of Good Agricultural Practices"), therefore it is possible to interested persons to learn the information.

- (2) Majority of land users currently have little interest in soil qualities;
- (3) Lack of educational activities;
- (4) Lack of motivation to implement good agricultural practice (except receivers of subsidies).

At the same time we can forecast that upon joining EU and increasing the amount of agriculture subsidies the implementation of good agricultural practice will expand.

2.2.5. Co-ordination of Convention implementation among institutions and their capacity

2.2.5.1. Identified problems in Biological diversity thematic sector

- (1) the dialogue between the structural units of MoE and Ministry of Agriculture in issues related to wood protection and management is lingering; difference of opinions about the solution of this problem in long-term is lingering capacity deficiency.

However, in latest years the understanding of those working in forestry on issues importance of non-over-exploitative forest management and preservation of nature valuables; this was promoted by various projects and staff training;

- (2) the greatest capacity problems in implementing the responsibilities can be observed in regional executive bodies, but here is no clear understanding which components limiting the capacity and in what amounts shall be improved;
- (3) lack of common cartography in Latvia and insufficient border mapping of specially protected territories in state land cadastre maps may endanger preservation of nature valuables, because allow for legal disputes and can also encumber reception and administering of EU support payments; majority of the respondents note that lack of common environment inspection limit performance of qualitative supervision functions;
- (4) insufficient capacity of regional institutions (including municipalities) relating to issues of different environment supervision and protection issues in respect to further (long-term) legal, implementation and supervision requirements un Convention implementation and obeying of EU requirements.

At the same time it shall be noted that recently activity is noticed in organising training and study seminars (Baltic Environment Forum) for promotion of understanding and implementation of EU requirements.

2.2.5.2. Identified problems in Climate Change thematic sector

- (1) insufficient existing capacity of environment protection institutions (human resources, finances) and lack of action programme for solution of climate change mitigation issues;
- (2) the responsibility of sectors and sector institutions towards Convention implementation has not been described in detail in normative acts;
- (3) limited human and financial resources for representing Latvia in international decision making related to Convention implementation.

2.2.5.3. Identified problems in Land Degradation thematic sector

- (1) Latvia is not ready to take part in soil information circulation activities of EU and global scale because it lacks aggregated information about Latvian soils that would correspond to internationally accepted standards;
- (2) Notable “sectoral”⁵ approach to solution of land degradation issues (different state institutions are responsible for only certain field and there is lack of proper co-ordination of their work);
- (3) Lack of information exchange and co-ordination among various institutions. As a positive example to be mentioned here we can note that within the system of one sector (for example, among structures of Ministry of Environment and Ministry of Agriculture) information exchange is stated to be effective enough.
- (4) Lack of implementation mechanism for Convention implementation;
- (5) Incomplete legislation (normative documents do not define the responsibility of sectors and their institutions for Convention implementation);

The legislation being currently into effect defines only that the responsible body for Convention implementation is Ministry of Environment, but does not define role of smaller institutions and division of functions;

- (6) there are no soil specialists in state and municipal institutions (either no staff positions are available);
- (7) specialists from involved sectors do not have opportunities for qualification improvement in the field of soils;
- (8) difficulties in achieving full participation in EU soil policy development processes.

2.3. Findings of legal analysis

2.3.1. Project current importance and methodology

Legal study in the project context is carried out after analysis of thematic expert’ s reports in accordance with GEF methodology as well as UN methodology, which have been developed for common implementation of multilateral arrangements in environmental protection field in Europe.

When analysing the synergy of thematic conventions basic interpretation principles, means and interpretation methods of international agreements were taken into account. Means of interpretation used are the texts, preambles and annexes of the conventions Complex sequence of the methods were applied as the main methods of convention interpretation: grammatical, systematic and teleological method.

⁵ The sectoral approach was identified as a deep-rooted problem in relation to the implementation of environmental policy in Latvia. Each ministry and institution tries to stay strictly within mandated topic. Thus, any issues that should require the involvement of more than one ministry or institution (such as land degradation where the responsibilities are divided among environment and agricultural bodies or in the case of climate change where these are divided among ministries of the economy and environment) are difficult to resolve or to push forward the progress in the particular area.

2.3.2. The compliance of the Latvian environmental rights with the Latvian international obligations in the field of implementation of the concerned conventions

2.3.2.1. Rio de Janeiro convention “On biological diversity”, hereinafter – Convention

The Convention had been prepared for signing in 1992 during the Rio de Janeiro World Summit. It came into force only on 29 December 1993, after reaching the set margin of ratifications. Latvia joined the Convention on 5 June 1995. From the legal point of view the convention is analogue to any other multilateral international agreement in the field of environmental protection, although, this Conventions is frequently regarded as “*framework*” or “*umbrella convention*”. The convention defines the general principles of biological diversity by defining the main objectives. In experts’ opinion the most important problem is the co-ordination of work within different conventions. It refers to co-ordination of conventions secretariat’s work, as well as co-ordination of decisions made by member states’ conferences in order to prevent overlapping of different measures and plans and to reduce the costs and ensure cost-efficiency. The co-ordination of the Convention is the task of the Ministry of Environment. An inter-ministerial commission, has been set up, which co-ordinates the implementation of the Convention. A delegation from the Latvian Government takes part in Member states’ conferences.

Complex measures have been taken, which lead to conclusion that at the system level the Convention in implemented, i.e. institutional mechanism and legal base have been created. The national programme for protection of biological diversity has been developed and updated. Two national reports on biological diversity have been drawn up. The national environment monitoring programme has been developed. The CHM – ‘*clearing-house*’ mechanism (‘information and co-operation network’) has been created. Harmonisation of Latvian and EU environmental rights is taking place in general, as well as in particular fields like biological diversity. The existing legal mechanism is supplemented by action plans, which include both single and regular (permanent) actions.

When analyzing the Latvian environmental rights in the context of biological diversity protection, it is obvious, that most of the legislative activities, both adopting new laws and regulations and amending of the existing, took place after 1995, reaching the peak intensity in 2000-2002. This can be explained by implementing the EU regulations in Latvian legislation.

2.3.2.2 UN convention comprehensive convention “On Climate Change”, hereinafter in chapter – Convention

The Convention has been signed in New York on 9 may 1992. Latvia joined the Convention on 5 June 1995, thus undertaking to fulfil a list of international obligations. The aim of the Convention is to ensure stabilised concentration of the Greenhouse effect gases (GEG) in the atmosphere up to level, which would prevent the dangerous anthropogenic gases from interfering into climate system. According to the Convention the member states should stabilise the amounts of GEG emission down to 1990 level by 2000. In 1997 the Convention had been supplemented by the Kyoto Protocol. Latvia ratified it on 30 May 2002. The Protocol states that during the period of 2008 – 2012 the amounts of GEG emission should be decreased by 5% in comparison with 1990. Latvia has to decrease the total amounts of GEG emission by 8% in comparison with 1990. There is a serious risk that the Protocol will not come into force until 2012, therefore Latvia might be unable to reach the perspective decrease of emission within the framework of these flexible mechanisms.

The implementation of the Protocol is additionally binding for the EU Member states, it means, that Latvia as an EU candidate country is obliged to ensure harmonization of the Convention with national rights until 1 May 2004. The Ministry of Environment is coordinating the

enforcement of obligations set by the convention. Latvia has developed political documents for the implementation of the Convention, and in addition, issues regarding implementation of the Convention On Climate Change were incorporated in several political documents. In 1995 the Environmental protection policy plan had been approved and it serves as the base for all activities in this field. It must be noted, that the Climate change problems are not included in the priority list of this environmental protection policy plan. Changes can occur, for it is planned to review the environmental protection policy plan by the end of 2003. In 1997 – 1998 under the leadership of the Ministry of Environment (former Ministry of Environmental Protection and Regional Development) a climate change prevention policy plan had been developed, which will undergo changes as well. In 2002 the Cabinet of Ministers of the Republic of Latvia adopted the strategy (2002 – 2012) for joint implementation of the projects incorporated in the Kyoto Protocol. Climate change decreasing policy concepts (for years 2003 –2012) have been prepared to be submitted to the Cabinet of Ministers. By the end of this year it is planned to develop Climate change decreasing programme. By now Latvia has submitted 3 national reports to the convention secretariat.

The analysis of Latvian Environmental rights in the context of climate change, shows, that most of the legislative activities, both adopting new laws and regulations and amending of the existing, took place after joining the Convention in 1995, reaching the peak intensity in 2002-2003 just like was the case with biological diversity protection.

2.3.2.3. UN Convention “On combating desertification / land degradation in countries subject to substantial dry periods and/or desertification, especially in Africa”, hereinafter – Convention

The Convention had been signed in Paris on 17 June 1994 and came into force on 26 December 1996. Latvia joined the Convention on 21 October 2002, in reply to the EU calling to all the member states and candidate countries to join this convention before the Rio +10 conference is held in Johannesburg. The Ministry of Environment is co-coordinating the enforcement of obligations set by the convention. At the moment it the implementation of this convention has been just launched, therefore it is hard to judge about its efficiency at the system level. It is clear that it would be advisable to set up an institutional mechanism for implementation of the requirements set by the convention in 2003. While the adoption of respective regulatory act is just a question of co-ordination and time, the development of actual mechanism is going to be both time and resources – consuming process. The situation with implementation of this Convention in Latvia from legislative point of view clearly reflect the regularities mentioned in connection with two other Conventions - if there are no strict EU requirements in a field of legal regulation, these issues in the candidate countries are “postponed”. It can only be described as natural in the given busy legislative process.

The inquired experts have come up with rather popular opinions regarding the development of system for implementation of this convention – the majority is of an opinion that the ratification of the convention has been conducted hastily and it is not feasible to implement and enforce these requirements in reasonable period of time. However, there are also opinions that welcome the ratification of the Convention and call for swift implementation of the requirements. The author’s opinion is based on real policy, namely – the implementation of the Convention has to be carried out gradually, reasonably based on principle of efficiency by taking into account and balancing the conflicting opinions of all parties involved.

2.3.3. Problems identified in Legal Chapter of the research

- (1) although in Latvia the system of environment protection rights is established it similarly to other countries does not include common (unified or fully harmonised) acts of

environmental rights, which would allow for implementation of all requirements of thematic conventions. The requirements are implemented by developing and improving different Latvian acts of environmental rights according to Convention requirements. The prepared laws and acts subordinated to the laws contain requirements of different type in different spheres of thematic Conventions;

- (2) information on requirements of thematic conventions is available mainly from reports, which are submitted to Convention Secretariats, which are difficult and almost impossible to access for the society. There are practically no researches on implementation of international environmental rights in Latvia;
- (3) in practice sometimes problems arise in respect to implementation of Convention requirements they are not fully implemented due to different reasons, for example insufficient financial resources, too tough requirements which are difficult to implement especially for such emergent countries as Latvia, lack of human resources, etc.;
- (4) operation system for institutions in Latvia responsible for implementation of thematic Conventions and their requirements have not been created, the aim of which would be to use synergy of thematic Conventions and in such way economise human and financial resources which would in turn allow for improvement of institutional capacity;
- (5) the procedure for information circulation and provision by adopting the most progressive practice of world countries is not sufficient;

Following the world experience dialogue and co-operation with NGOs shall be activated especially with those whose activity is directly connected with spheres regulated by the thematic conventions as well as coordinated activities for completion of environment protection informative system shall be practiced.

III In-Depth Analysis of Priority Capacity Needs/Constraints

3.1. Priority Capacity Needs/Constraints

3.1.1. Identifying and Selecting Priorities

Through the preparation of thematic profiles and the subsequent analysis of cross-cutting issues that was undertaken, a large number of capacity needs and constraints were identified. To make

the most effective use of available time and resources, a series of regional consultations, briefings, and high-level meetings were held to develop a relatively short list of priority needs that would be subjected to further analysis. The following table contains the final set of 20 priorities- capacity constraints that emerged from this process:

No	Priority capacity constraint
1	Lack of an official, integrated Environmental Information System that includes a GIS component and an Internet-based environmental portal.
2	Lack of a national-level strategic approach to soil protection and management that includes a FAO-consistent soil mapping and control system.
3	Lack of a unit or program dedicated to making more effective use of existing environmental information centers and supporting the establishment of new ones.
4	Salaries of public employees in the environmental sector (including inspectors) are not sufficiently competitive with the private sector
5	Developing the capacity of particular units or sectors at the national, state, and local levels to identify potential sources of funding and prepare competitive
6	Related compensation and incentive programs for landowners are not fully operational and / or sufficiently understood by key stakeholders.
7	Insufficient or inconsistent levels of funding for environmental monitoring and data collection, including a lack of state level policy and strategy for environmental monitoring.
8	Lack of an operational system (including monitoring and reporting) to facilitate participation in existing or future regional and global GHG trading systems and other flexible implementation mechanisms
9	Insufficient or ineffective environmental education and public awareness programs that promote “green lifestyle” in Latvian households.
10	Lack of curricular materials and textbooks specifically focused on the Latvian environment, which integrate global environmental considerations.
11	Lack of a national environmental education strategy that incorporates and promotes “best practices”.
12	Inadequate state support and planning for higher education programs focused on the environment, in particular insufficient planning regarding the number of specialists needed in particular environmental disciplines.
13	Existing air protection policies and programs do not adequately incorporate global environmental considerations.
14	Lack of an integrated land use policy that incorporates all relevant sectors, not just agriculture and forestry*
15	Territorial development plans do not adequately incorporate environmental protection obligations and requirements, including those involving the implementation of the conventions.
16	The SPNT management mechanism/system is inadequate, particularly with respect to the integration of existing regional and municipal authorities.
17	Lack of scientific research related to the three Rio conventions, including ministerial procurements, approvals, and cooperation.
18	Lack of Integrated Soil Research Program.
19	Insufficient capacity and financial resources to prepare the Implementation Strategy for UNCCD.
20	Existing soil monitoring is inadequate and requires a more comprehensive and integrated approach.

* The in-depth analysis revealed that state land policy that is coherent (i) land use (i.e., planning, environmental protection, agricultural, forestry, transport and all.), (ii) ownership and (iii) land value (market value, cadastral

value; taxes) policy is not in place and in fact ‘integrated land use policy’ is not appropriate meaning for the capacity constraint.

3.1.2. Conducting Regional Consultations

The capacity assessment involved wide range of interested parties at local and regional level because significant part of the capacity issues have to be addressed in this level and the analysis showed that awareness of existing environmental requirements and related matters in local level sometimes is crucial.

Regional consultations include range of regional seminars. Key stakeholders were invited to the seminars from the thematically related or interested organizations and institutions of the corresponding region. The draft capacity assessment was presented including all indicated capacity constraints. Participants give contribution by validating those capacity constraints and indicating new ones. The draft assessment of the capacity that was presented informed them about actual points that require more attention to reach compliance with environmental obligations. The feedback from the seminars was reflected in the assessment that was presented further to the high-level decision-makers.

3.1.3. Reformulating and Finalizing the Priorities

The last phase of the prioritization process involved reviewing the results of the senior-level meeting, reformulating the identified priorities to make them more consistent with each other in terms of structure and specificity, and validating the resulting reformulated priorities with key stakeholders and decision-makers involved in the NCSA process. Once these steps were completed, the methodology for conducting in-depth analyses of these priority capacity needs/constraints was developed and implemented. This methodology focused on identifying and analyzing the principal causes and key barriers for each of the selected priorities in three levels- individual, institutional and systemic.

3.1.4. Involving Senior Decision-makers

One of the key points found important during the NCSA process, was the involvement of senior decision makers from the responsible ministries and agencies. Better awareness and support of senior decision makers is one of the main preconditions to address the identified capacity constraints effectively and raise the capacity at individual, institutional and systemic level.

Firstly, senior decision- makers evaluated all capacity constrains that was emerged from the assessment process (int.al., regional seminars) and set priorities. The NCSA was taken to evaluate compliance with 3 Rio conventions, but priority capacity constrains set in the assessment process showed that most of them (i.e. 12) addresses cross- cutting issues. Only 8 priority capacity constraints conditionally were related to biological diversity, land degradation or climate issues. But it has to be emphasized that even for those issues co-operation and co-ordination among various agencies plays crucial role. The in-depth analysis of all priority issues was carried on and possible actions/recommendations were set.

Afterwards, the possible actions/recommendations for each of priority capacity constraint were presented in high- level senior decision- makers’ workshop. Senior decision makers of key ministries and agencies played significant role in validation of possible recommendations and actions addressing the priority capacity constraints.

3.2. Land Degradation

3.2.1. Legislative/Regulatory Framework

3.2.1.1. National Legislation

Latvia joined the convention by law “On United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa” (UNCCD), adopted in September 26, 2002. The convention entered into force at 9 October 2002.

The main legal acts that stipulate different requirements with regard to soil protection and management are:

- The *Law On Environmental Protection* (1991), which lays down the main principles of Latvian environmental policy, such as polluter-pays and precautionary principles. It defines the competence of the state and the municipal authorities with regard to environmental protection and control as well as their main duties, rights and liabilities;
- The *Law On Pollution* (2001) secures land from pollution. Subsequent to this law, regulations of Cabinet of Ministers No. 388 “Environmental Quality Standards for Soils” (15.07.2003) define the maximum permissible concentrations of heavy metals and persistent organic pollutants (POPs). Moreover, Regulations of the CoM No. 365– “Regulations on Utilization, Monitoring, and Control of Sewage Sludge and the Compost Thereof” (20.08.2002) prescribe the allowed usage of sewage sludge as fertilizer for agricultural lands in order to prevent land degradation;
- The *Law on Regional Development* (21.03.2002.) states that different spatial/territorial plans have to be elaborated at national, regional, district and local municipalities levels. Based on the land values, agricultural areas of national importance are defined at the state level and they should be incorporated and reproduced in district and local municipalities’ territorial plans. Transformation of those particular areas for other land-uses is not supported by the state;
- The *Law On Protection Zones* adopted in 1997 stipulates the general provisions for the prevention of protection zones of reservoirs and watercourses with a view to conserve the biotopes of migrating bird species, to ensure the continuity of migration routes as well as maintaining water quality;
- The Regulations of CoM No. 531 “On Protection of Water and Soil from Nitrate Pollution Caused by Agricultural Activity” (18.12. 2001.) were developed in accordance with the EU Directive 91/676/EEC. The Regulations stipulate vulnerable territories that are subject to more stringent requirements in respect of water and soil protection from pollution with nitrates from agricultural activity, as well as the criteria for determination of those territories and the procedures for their management;
- The Ministry of Environment (MoE) and the Ministry of Agriculture have accepted the Code of Good Agricultural Practice for Latvia, which incorporates conditions working in favour of prevention against agricultural land degradation. The document summarizes and highlights practical items important for soil conservation in the context of other activities that would decrease the negative influence of agriculture on the environment;
- The National Environmental Policy Plan (2004- 2008) is the background document for Latvian environmental policy (adopted by the CM on 08.02.2004). Regarding land degradation, the Plan foresees concrete actions for the inventory of land contamination sites, the sanitation of polluted sites, preservation and protection of soil

quality, and decreases of diffuse pollution by limiting soil erosion and degradation of agricultural lands;

- Other important legislation acts related to sustainable land and soil use and resources management are: (1) The Rural Development Plan (2004 – 2006), (2) The National Environmental Monitoring Program (2002) containing the sub-programs of agricultural land monitoring, forest monitoring and integrated monitoring, etc.

3.2.1.2 EU Development

Progress in the EU has been made since 2001 when the “Thematic Strategy On Soil Protection” was included in the “6th Environment Action Program” (EAP) and the European Council endorsed “Commission Communication On Soil Protection” (further- Communication) in 2002.

The EAP focuses on areas where more action is needed and new European initiatives will make a difference. Thematic Strategies are one component of the actions foreseen within the 6th EAP. This is the first occasion on which the Commission has addressed soil protection for its own sake and therefore the Communication is both broad and descriptive in approach as well as charting the way forward. According to this some specific tasks for soil protection are specified. The Communication calls for the development of a European soil monitoring system capable of providing reliable, comparable and regular information on soil conditions in Europe. However the key to progress towards sustainable use of soil resources remains better integration of soil protection into sectoral, local and regional policies.

It is foreseen that the Thematic Strategy for soil protection will be adopted in 2006 and the framework directive will follow.

Notable activity at the EU level has been the development of the European Soil Information System (EUSIS) in the framework of the activities of the European Soil Bureau. It is a large collaborative project covering all member states and bordering countries and involves national soil surveys and soil science institutions in more than 45 countries. The current coverage of the system includes continental Europe, Siberia and part of North Africa and the Middle East.

The backbone of the system is the Soil Geographical Database of Europe (SGDBE) at scale 1:1,000,000, that has been created starting from the first digitized soil map of Europe in 1985. The database is extensively used in different fields: agriculture, water protection, climate change, flood forecasting, desertification assessment, etc. The recent development of the EU Thematic Strategy for Soil Protection has been mainly based on data and assessments derived from this soil database.

3.2.2. “Existing soil monitoring is inadequate and requires a more comprehensive and integrated approach”

3.2.2.1. Background

Despite the fact, that soil is a vital and largely non-renewable resource, integrated soil protection, i.e. integration of soil protection into sectoral, local and regional policies, is a rather new approach both, in Latvia and in the EU. Although Latvia is situated in a relatively humid area, the country still faces many significant soil degradation problems. The most common of these problems in Latvia is erosion. Wind erosion is typical for coastal territories and inland areas with sandy or organic (muskeg) soil that is used as croplands. Other notable problems include land degradation due to woodcutting and soil pollution in polluted sites, etc.

The UNCCD was ratified on 9 October 2002. The objective of the convention is to combat desertification and land degradation in a manner consistent with the principles of sustainable development enshrined in Agenda 21.

Progress in the EU has been made since 2001 when the “Thematic Strategy On Soil Protection” was included in the “6th Environment Action Program” and the European Council endorsed “Commission Communication On Soil Protection” in 2002.

The European Parliament resolution on the Commission communication “Towards a Thematic Strategy for Soil Protection” (COM(2002) 179 - C5-0328/2002 - 2002/2172(COS)) int. al.,:

- Calls on the Commission to draw up guidelines, addressed to the Member States and the competent regional authorities, for preventing, monitoring and controlling soil pollution;
- Supports the Commission in collating and perfecting the existing databases and completing the maps in order to obtain a georeferenced system; approves, likewise, the creation of a digital geographic information system which would gather the currently fragmented information at appropriate levels and which would be accessible to the public.

Integrated soil monitoring is a tool to obtain actual information on soil conditions and serves as a foundation for effective soil management.

3.2.2.2. Institutional Framework

The Ministry of Environment (MoE) and its subordinated institutions are implementing environmental policy in Latvia, including prevention of land degradation. For the implementation of the UNCCD in Latvia the main responsibility lies with the MoE; the national focal point for national coordination of UNCCD implementation is located within the Department of Environmental Protection of the MoE.. In addition, different institutions subordinated to the MoE collect and process environmental data and information necessary for the assessment of soil quality and management.

The Latvian Environment Agency (LEA)⁶ is coordinator of the National Environmental Monitoring Programme (NEMP) and has the national reference laboratory of environmental quality testing. Int. al. testing of soil samples is provided. The State Geological Survey (SGS)¹ collects and processes geophysical data. The Latvian Hydrometeorological Agency (LHMA)¹ executes hydro-meteorological, oceanographical, geophysical and agrometeorological researches. The Centre of Agrochemical Studies of the Ministry of Agriculture (MA) performs agrochemical examination of soil based on signed agreements with farmers (landowners) upon their demands. Survey data obtained by this examination could serve as additional information for soil conditions.

Monitoring of soils within forestlands is performed by:

- The Latvian State Forestry Research Institute “Silava” (currently formally subordinated by the Ministry of Education and Sciences) as part of the forest resource monitoring;

⁶ According to the MoE Development Strategy for the year 2005- 2007, the Latvian Environment Agency, the State Geological Survey and the Latvian Hydrometeorological Agency was reorganized and the Latvian Environment, Geological and Meteorological Agency (LEGMA) established instead; all functions of these institutions now is under the LEGMA authority.

- The State Forest Service, subordinated to the MA as part of the II level forest monitoring (according with the EC program “Forest Focus” and International Cooperation Program “Forest Monitoring”).

The State Land Service (SLS), institution supervised by the CoM and subordinated to the Ministry of Justice, performs administration of real estate, territorial inventory (cadastre) and visualization of geographical territorial information (geodesy and cartography). Accordingly to law “On State Land Service” the Service executes a list of tasks related to management of land resources: execution of state land settling; co-ordination and management of development of land cadastre and geographic information system; providing of this information to state, legal and private persons; co-ordination of scientific study directions; land supervision and land use control. Due to budgetary cutbacks there has been a reduction of staff. Presently, there are no employees at the institution who would have specific duties connected with managing of soil resources.

Finally, the Ministry of Defence has taken over and currently make use of former Soviet military bases that have significant soil and ground pollution problems.

3.2.2.3. Specific Legislation/Regulations

Regulation of the CoM No. 162 Regulations “On Environmental Monitoring and Register of Polluted Sites” (08.04.2003.) set principles and requirements for performance of environmental monitoring. However these regulations are too general for real implementation and integration in the state level monitoring system (i.e., the National Environmental Monitoring Program); institutional responsibilities to ensure collaboration and information exchange are not defined.

The National Environmental Policy Plan for 2004-2008 (adopted 08.02.2004) foresees concrete actions for the inventory of contaminated sites, the reclamation of polluted sites, the preservation and protection of soil quality, and the promulgation of measures to decrease pollution by limiting soil erosion and degradation of agricultural lands.

Generally, environmental monitoring is covered by different legal acts, but in relation to integrated soil management it is insufficient and fragmented, because this approach emerge by taking first steps for acceptance of the UNCCD since 2002. Monitoring requirements are defined for separate soil issues and concerns, like polluted sites and fields fertilized by sewage sludge, etc.

3.2.2.4. Existing programs and projects

The NEMP, endorsed in 2002, contains following sub-programs, fully or partially focused on monitoring of soil quality and related factors:

- Integrated Monitoring;
- Monitoring of Forests;
- Monitoring of Agriculture Land Soil and Vegetation;
- Monitoring of Soil Radiation;
- Monitoring of Geological Processes in the Costal Risk Zones;
- Monitoring of Karst Formations.

Due to restricted financial resources, the Monitoring of Agriculture Land Soil and Vegetation sub-programme has been stopped and Monitoring of Forest sub-programme concerning forest soils has not been initiated. Only some sub-programmes, such as the Monitoring of Soil Radiation and the Monitoring of Geological Processes in the Costal Risk Zones, have been implemented fully, but mostly for a limited time frame and not covering all the territory of the

country. The Integrated Monitoring sub-programme has been partly carried out since 1996 and addresses only components of soil and soil water.

The State Ltd. "Centre of Agrochemical Studies" performs agrochemical testing of soil to estimate soil fertility. Mainly farmers, landowners, and legal persons order these analyses. The State Forest Service, institution subordinated to the MoA, organizes survey of forestlands, performed by different institutions – University of Latvia and other. Monitoring of forestlands is included also in the forest resource monitoring performed by the Latvian State Forestry Research Institute "Silava".

Though in the last decade financing for soil investigations in Latvia has dramatically decreased, some scientific investigations have been undertaken by the University of Latvia, the Latvian University of Agriculture, Agrochemical Research Centre, state Ltd., the State Forestry Research Institute "Silava" and the Institute of Biology. These investigations were mainly focused on finding solutions for practical problems and are financed either by the MoE and by the MA or by the Council of Science. Admittedly, they were small-scale, short-term projects with very limited funding.

The available information and monitoring cannot provide a comprehensive view of Latvian soil conditions and allow an informed estimate of land degradation processes in the country. Soil information is stored in different databases of the institutions mentioned before. The most significant information is stored in databases controlled by at least five state institutions: the State Land Service, the SGS, the LEA, and the LHMA. These soil databases are very different in format and some of them are technically and technically outdated. Some basic soil information is still unfinished (unpublished). Data base structure, information placement have not been standardized, therefore information circulation between the databases currently is not possible.

3.2.2.5. Selected Principal Causes

Integrated sustainable land management (including soil protection) approach was not a priority for state policy until ratification of UNCCD and initiation of this approach at the EU level.

As it is stated in the Third European Environment Assessment Report (2003), [data] gaps are a consequence of the lack of soil protection legislation at the EU level and the consequent absence of legal requirements for reporting. The latest environmental policy is closely linked with transposition and implementation of EU environmental policy in the country. Due to the lack of strict EU requirements in a field of soil protection, integrated soil protection policy is "postponed" and more "urgent" priorities, like waste management, water protection (e.g. implementation of Directive 91/271/EEC on Urban Waste Water Treatment), are pursued instead.

Another reason is that previously soil monitoring and research measures were closely linked with the agricultural land use policy in order to estimate soil fertility and other agrochemical parameters crucial for agricultural practice. It is responsibility of the Ministry of Aquiculture. Soil research and mapping was task of the SLS⁷), and some work had been done to gather necessary information, but since the SLS is subordinated to the Ministry of Justice, this task is not set as a priority in a circumstances of restricted budget allocated for the SLS. Performing soil quality monitoring and management from a primarily environmental protection perspective has only recently begun.

The NEMP is not sufficiently comprehensible in relation to integrated soil monitoring approach

The soil monitoring should be based on specific management goals set by legislation. At the moment this approach is not strong regarding soil monitoring. The strategic documents, like UNCCD Implementation Strategy (National Action Plan) could contribute to this.

⁷ The SLS was formed in 1993 by consolidation of the Department of Land Use Planning of the Ministry of Agriculture, the Department of Geodesy and Cartography of the Ministry of Defence, number of enterprises linked with this branch and the land use planning structure in the municipalities

Lack of national soil strategy and the National Action Plan of the UNCCD.

Its cause problems to define priorities for the collection of necessary information for soil management because monitoring should be set in a way to answer the question whether the current management options are appropriate and / or whether new management activities should be planned and implemented. This leads to the situation that soil monitoring is not chosen as a priority, when restricted budget is allocated for implementation of the NEMP because priorities are mainly those monitoring activities, which are requested by the EU directives.

This cause is analysed as a separate capacity constraint in the in-depth analysis “Insufficient capacity and financial resources to prepare the National Action Plan (Implementation Strategy) for implementation of the UNCCD” (see section 8.5.).

Poor coordination among the key institutions collecting the information on land issues.

Insufficient coordination among the institutions, which are subordinated to different ministries and are involved in the soil monitoring and research matters, and inadequate information management are significant problems that prevent development of integrated approach to soil monitoring. E.g., information on soil degradation is collected and stored in different state or municipal databases (digitally and manually), that is not inter-correlated and comparable, and often illegible for users not familiar with them. There is a lack of real coordination between the NEMP sub-programs, managed by the LEA and monitoring activities organized by the State Forest Service, institute “Silava”, “Centre of Agrochemical Studies” and other activities described above. Of course, there are some exceptions, e.g., the State Forest Service provides the LEA with its monitoring data (in paper form) annually; the LEA publishes its monitoring data in *Internet*, etc. But still many institutions (e.g. institute “Silava”, “Centre of Agrochemical Studies”, University of Agriculture and University of Latvia, State Land Service etc.) stand outside of coordination mechanisms.

Quite often this poor cooperation and inadequate sharing of information is caused intentionally because of willingness of some institutions to sell their data many times to different “consumers” – also mainly state and municipal institutions.

3.2.2.6. Key Barriers

Lack of state environmental monitoring policy.

Environmental monitoring requirements, incorporated into legal acts, are too general and do not define national environmental monitoring strategy and institutional framework. There is no legally approved implementation mechanism to secure transparent and coordinated implementation of the NEMP (although development of such mechanism was initiated by the LEA⁸ with development of Monitoring Council, which was operating only for one year due to the lack of appropriate mandate). This cause is analysed as a separate capacity constraint in the in-depth analysis of capacity constraint “Insufficient or inconsistent levels of funding for environmental monitoring and data collection, including a lack of state level policy and strategy for environmental monitoring” (see section 11.2.).

Lack of permanent state funding for the execution of the NEMP (int. al. sub-programmes devoted to soil monitoring).

At present only several soil monitoring requirements are stipulated by legislation, mainly devoted to the particular problems, but it is not integrated soil monitoring, and there are no legal obligations to perform mandatory particular “soil” sub-programmes. However the Development Strategy (2005- 2007) of the Ministry of Environment incorporates goal to provide permanent

⁸ since 2005 the LEA is reorganized and new body- the LEGME is established

funding for the NEMP. This could change the situation and at least that minimum what is foreseen by the NEMP could be implemented.

Existing soil information is not summarized (finalized)

Notable basic information gathered within two following surveys-(i) three-level land supervision (soil monitoring) of agricultural lands (1992. – 2001.), realized by the SLS and (ii) geochemical assessment and mapping of Latvia in scale 1:500 000 gathering extensive material about soils, mother rocks and geochemical characteristics performed by SGS from 1998 till 2001- is still unfinished.

Lack of coordination mechanism among key institutions involved in the soil information management that are subordinated to different ministries (exchange of information; updating existing soil information).

Although the development of the NEPM to some extent streamlined institutional collaboration it is still insufficient because of inconsistent legislation providing responsibilities of institutions engaged in soil information management and research activities (data exchange and submission, coordination). Key institutions (mentioned in section 8.2.2.) are subordinated to different ministries and monitoring funded from different sources - state funding allocated to the MoE, MoA and the Ministry of Education and Sciences (funding distributed through scientific grants), international and local project funding.

Also some scientific institutions and individuals are interested in the lack of such effective cooperation because they face short of financing and sometimes funding allocated for monitoring is like support for their being. That sometimes leads to the situation when monitoring (or investigation) is ordered by different ministries and it is possible to get twice of funding than it would be if all monitoring works would be streamlined.

The LEA has no mandate and no legal mechanism to influence institutions subordinated even to the MoE to streamline monitoring works, far from institutions subordinated to other ministries.

Lack of defined and approved integrated soil management (environmental protection) objectives. Currently there are no set integrated environmental protection goals for soil management. The Regulations of CoM No. 388 “Environmental Quality Standards for Soils” was approved in 2003 defining the environmental quality normative for soil, but there are not integrated soil management goals. Current legislation sets sectorial goals. E.g., the agricultural activity (fertilising) in central part of Latvia is limited to comply with EU Nitrate directive.

The UNCCD Implementation Strategy and forthcoming EU soil legislation will contribute to this issue.

3.2.3. Lack of Integrated Soil Research Program

3.2.3.1. Background

Although Latvia has remarkable traditions on soil research, Latvian science, int. al. soil research has faced drastic decrease of funding during the last decade. At the moment there is no substantial research on such fundamental issues as soil genesis, morphology, classification, soil mapping - issues that have good foreruns previously. Because of low priority given to soil research, scientific grants are of small amount and very limited hence prohibiting to do investigations of national importance and attraction of new soil scientists.

The issue claims due attention, knowing that the UNCCD is accepted in 2002. To be in conformity with the objective and principles of the UNCCD scientific investigations, and

different kind of scientific collaboration have to be favoured, like collaboration within joint research programs. The measures of the National Action Program for the implementation of the UNCCD have to be scientifically grounded and advanced scientific expertise is required.

National Soil Research Programme is indispensable for adoption of other legislation, as UN Framework Convention On Climate Change and the Kyoto Protocol (estimation of carbon balance) and adoption of different land management practices (e.g., for EU Common Agricultural Policy). Furthermore the EU environmental policy recently has focus on soil management issues and development of related legislation is in process.

3.2.3.2. Institutional Framework

According to the *Law on Scientific Activities* the structural organization of administration of Latvian research consists of the Ministry of Education and Science (the MES), the Latvian Council of Science and its Expert Commissions, the Latvian Academy of Science (the LAS) and different research institutions.

The Cabinet of Ministers (CM) makes decision on the state science and research policy. The Ministry of Education and Science is the central executive body responsible for the development and realization of state policy in the area of science and research. The Ministry manages the budget allocated to education and science. The total domestic expenditure for Research and Development in 2000 was 20.99 million lats representing 0.48% of the GDP, but the government expenditure for Research and Development in 2000 was 8.7 million lats, only 0.2% of the GDP.

The Ministry of Environment (MoE) supports projects of applied research to promote solutions for the priority problems of environmental protection. The Ministry of Education and Science allocate financing, but the MoE keeps responsibility to choose actual projects. The maximum amount is to 4000 lats per project, therefore research is limited and only small projects can be performed.

The Latvian Council of Science is collegial body of researchers and consists of representatives' from the the MES, the LAS, the Council of Rectors, the Latvian Academy of Forestry Sciences, the Latvian Association of Scientists, and the Expert Commission in 14 research fields. Regarding research programmes, the Council makes proposals for the development of science and research priority areas and organizes the evaluation and funding of theoretical and applied research projects. About 52% of the state science budget (governmental funds) is allocated by the grants for theoretical and applied research on project-to-project basis. Council administers grants given to winners of the national project proposal competition.

Though in the last decade financing for soil investigations in Latvia has dramatically decreased, some important investigations have been undertaken namely by the University of Latvia; the Latvian University of Agriculture; Agrochemical Research Centre, state Ltd.; the State Forestry Research Institute "Silava", and the Institute of Biology. These investigations mainly are focused on finding solutions for practical problems and are financed either by the MoE and the Ministry of Agriculture or by the Council of Science. Though these investigations are small-scale, short-term projects with very limited funding.

The Centre of Agrochemical Studies of the Ministry of Agriculture (MA) performs agrochemical examination of soil based on signed agreements with farmers (landowners) upon their demands. Survey data obtained by this examination could serve as additional information for soil conditions.

Survey of forestlands is performed by:

- The Latvian State Forestry Research Institute “Silava” (currently formally subordinated by the Ministry of Education and Sciences) as part of the forest resource monitoring;
- The State Forest Service, subordinated to the MA as part of the II level forest monitoring (according with the EC program “Forest Focus” and International Cooperation Program “Forest Monitoring”).

There are two state universities - the Latvian University of Agriculture (LUA), particularly the Faculty of Agriculture, and the University of Latvia (UL), particularly the Faculty of Geography and Earth Sciences, that provides scientific capacity for land issues in Latvia. Scientific staff from both of mentioned universities represents Latvia in international projects (SOTER, SOVEUR, etc.).

3.2.3.3. *Legislative/Regulatory Framework*

The *Law on Scientific Activity* (1992, with amendments in 1996, 1998, and 2001) regulates the administrative, financial and institutional features in the area of research and development and determines the competence of the Ministry of Education and Science, the Latvian Council of Science and other bodies. It describes the research and development financing priorities through the state budget and determines the rights and duties of organizations and individual (legal and physical entities) engaged in research.

Other important legislation acts are several regulations of Cabinet of Ministers – On State Ordered Research Projects; On State Research Programs, On the Latvian Council of Sciences etc.

The vision for the future development of R&D is defined in the *Guidelines for Developing Higher Education, Science and Technology (for year 2002-2010)*, approved with the regulation No 125 of the Ministry of Education and Science, March 12, 2002. One of the tasks set up in the document is to increase the role of science in higher education establishments and especially in universities by restructuring the research system.

3.2.3.4. *Soil research projects*

In the last ten years several international projects concerning the inventory and assessment of soil resources at a European level financed by external donor the European Commission, have been implemented. Some specialists from Latvia (mainly from the LU and the LUA) have participated in the following projects:

- Global and National Soils and Terrain Digital Databases: Assessment of Soil and Terrain Vulnerability to Pollution in Central and Eastern Europe. – FAO, ISRIC (International Soil Reference and Information Center), European Soil Bureau, 1999.
- The European Soil Data Base on CD – ROM / Soil Geographic Data Base of Europe at scale 1:1,000,000 and Soil Profile Database of Europe for use at 1:1,000,000 scale. – European Soil Bureau. European Commission, 1999.

The projects make a contribution in harmonization of Latvian soil information (classification) with EU countries. Latvia is represented in European soil map and European Soil Data Base, however the scale of the map is small for national level and information of database requires update and further investigations.

3.2.3.5. *Selected Principal Causes*

State procurement suffers from a lack of long-term, strategic planning in the applied sciences.

There is no a long-term state procurement strategy for the research at all apart from the soil research program. The one-year applied science projects supported by the MoE are insignificant to undertake integrated soil research program.

Sustainable land management (including soil protection) approach was not a priority for state policy until ratification of UNCCD and initiation of this approach at the EU level.

Former soil investigation approach was interlinked with assessment of effectiveness of agricultural practice, i.e., survey of soil agrochemical quality. Therefore mainly agricultural lands were investigated, in 80ties overall mapping of soils were carried out but it was interrupted in 90ties. Sustainable land management approach is started recently and is very linked with transposition and implementation of EU environmental policy. Because of lack of strict EU requirements in the field of soil protection, separate soil protection policy is “postponed” and most “urgent” priorities, like waste management, water protection (e.g. implementation of Directive 91/271/EEC on Urban Waste Water Treatment), are set instead.

Insufficient number of soil experts.

Considering the fact, that nature sciences are mainly optional subjects in the secondary schools, recently the Ministry of Education and Science have set some support measures for priority nature sciences, but soil science is not considered as one of them.

Lack of national soil strategy and the UNCCD implementation plan.

Applied science definitely should answer on the questions needed for successful implementation of management policies and measures (in this particular case, the soil management and the sustainable land management). Currently, in Latvia such management policy does not exist. Without having the national soil strategy and the UNCCD implementation plan it is impossible to set priorities for soil research in Latvia. See the in depth analysis for the capacity constraint “Insufficient capacity and financial resources to prepare the Implementation Strategy for UNCCD” for more detailed information.

3.2.3.6. Key Barriers

The one-year applied science projects supported by the MoE are insignificant to undertake integrated soil research program.

The amount of funding, that has been allocated to applied science projects do not succeed remarkable investigations and thereof contribution for the implementation of the UNCCD, only short-term studies. Soil issues at this moment require long- term permanent studies supported by permanent funding.

Restricted state budget allocated for theoretical and applied research.

The situation is unsatisfactory regarding allocation of state budget for theoretical and applied research for scientific institutions. In fact, financing is used mainly to provide study process in the universities, but not to develop applied research. There is no permanent state budget for theoretical research at all. This is the obstacle that hinders research and development to promote sustainable land management, including soil monitoring, studies of degraded areas and their rehabilitation nature sciences. Research is done mostly with international support and within collaboration projects.

Grant administration system is not transparent enough.

The Latvian Council of Science, basing on the conclusions of the expert commissions, is evaluating project proposals submitted for grants. Evaluation is based on the following criteria:

- Scientific quality and feasibility;

- Qualifications indicated by publications;
- Patents and etc.

Because the Council is a collegial body of researchers, which are often involved in both, allocation of finances for grants and performance of the scientific work in these grants, the allocation of grants based on the aforementioned criteria has not been a transparent process. When state procurement (priorities) for applied research are not defined, grants are allocated for most qualified and successful scientists complying with above-mentioned criteria but not for the research needed to support practical challenges for different sectors. Although Latvian scientists are highly experienced and knowledgeable on soil genesis, morphology, physics, classification, and mapping, fundamental scientific investigations are not high priority research themes facing very limiting financial grants.

Insufficient number of new scientists in the nature sciences due to the inconsistent state level planning of necessary specialists for the coming years.

This barrier is a question of future warranty of soil experts and it is acute due to the fact that nature sciences are mainly optional subjects in the secondary schools. Graduates from the secondary schools choose to study in these fields, where high reward is expected (economy, law and all). This leads to the situation when graduates working in positions in public sector are without necessary competence and experience to be an expert in soil matters.

The graduates from the universities have weak possibility to get grants for initiation of the research activities in given field, e.g. soil science, to continue successful PhD studies, and to begin scientific carrier. It results in the insufficient number and competence of graduates in the nature sciences. Restricted financial and technical possibilities lead up graduates to choose another field of science. Currently, the situation could change because the financing for PhD studies and postdoctoral research is allocated from the EU structural funds.

Lack of modern laboratory equipment in universities and institutes.

Because of limited budget allocated to scientific institutions, there are no possibilities to provide it with advanced equipment. Some equipment is provided through international assistance projects and EU structural funds, but it is not adequate. Research and training, both, are hindered.

Lack of actual, updated and assessable soil information.

Basic information that may be used for research program is unavailable, insufficient, or incomplete. In some cases restricted access to available information or user-unfriendly databases delays to use it. Processing of some actual information is still not finished, e.g. land supervision (1995. – 2000.) in 190 farms realized by the SLS, geochemical assessment and mapping of soils, mother rocks and geochemical characteristics performed by the SGS that could be a good starting point for the development of research program.

3.2.4. Insufficient strategic planning with regards to soil protection and management, which has resulted in the failure to develop an FAO-consistent soil mapping and control system

3.2.4.1. Background

Despite the fact, that soil is a vital and largely non-renewable resource, integrated soil protection, i.e. integration of soil protection into sectoral, local and regional policies, is rather new approach both, in Latvia and in the EU.

Soil protection and management is very important issue in Latvia because 32 % of country's population lives in rural areas and a majority their income depends on agriculture and/or forestry. At present, agriculture represents 2.8 % of GDP (primary production). Forestry provides

employment for 2,4 % of the population and represents nearly 12 % of GDP, including 40 % of Latvian export income.

Despite the fact, that soil is a vital and largely non-renewable resource, sustainable soil protection, i.e. integration of soil protection into sectoral, local and regional policies, is rather new approach. The UNCCD was ratified on 9 October 2002. The objective of the convention is to combat the desertification and land degradation using effective means in all levels with a support of international society applying the programs of partnership according to the main issues of sustainable development of the Agenda 21. Progress in EU has been made since 2001 when the thematic strategy on soil protection was included in the 6th Environment Action Programme and the European Council endorsed Commission communication on soil protection in 2002. The communication calls for the development of a European soil monitoring system capable of providing reliable, comparable and regular information on soil condition in Europe.

3.2.4.2. Institutional framework

The Ministry of Environment (MoE) and its subordinated institutions are in charge of implementation of the environmental policy in Latvia, including prevention of land degradation. For the implementation of the UNCCD the main responsibility lies on MoE, the NFP. is set in the Department of Environmental Protection of the MoE.

Different institutions subordinated to the MoE collect and process the environmental data and information necessary for soil management and for assessment of soil quality and management. The Latvian Environment Agency (LEA)⁹ is coordinator of the National Environmental Monitoring Program (NEMP) and has a national reference laboratory for environmental quality testing incl. soil analysis. Several components of soil monitoring are partly realized within the different subprograms included in the NEMP.

The State Geological Survey (SGS)⁴ collects and processes geophysical data. Between 1998 and 2002 the geochemical assessment and mapping in scale 1:500 000 in Latvia were carried out and as a result extensive material about soils, mother rocks and geochemical characteristics is gathered. However the results of mapping are still under processing and are not available for wider public yet. The Latvian Hydrometeorological Agency (LHMA)⁴ executes hydro-meteorological, oceanographical, and geophysical and agrometeorological researches.

The Ministry of Agriculture (MA) is the central executive power institution developing the state agriculture and forestry policy. The State Land Service, institution supervised by the Cabinet of Ministers and subordinated to the Ministry of Justice supervises exploitation and protection of land resources. State Land Service is under supervision of Ministry of Interior. Finally, the Ministry of Defense has taken over and currently makes use of the former Soviet military bases that have significant soil and ground pollution problems.

3.2.4.3. Legislative/Regulatory Framework

⁹ According to the MoE Development Strategy for the year 2005- 2007, the Latvian Environment Agency, the State Geological Survey and the Latvian Hydrometeorological Agency was reorganized and the Latvian Environment, Geological and Meteorological Agency (LEGMA) established instead; all functions of these institutions now is under the LEGMA authority.

Latvian legislation is currently being harmonized with the European Union legislation. Regarding land degradation related legislation, Latvia has not asked for a transition period for the implementation of the relevant directives and regulations. The Latvian Strategy for Sustainable Development states, that “Latvia must build up a stable economy capable of ensuring social needs at the same time safeguarding that the rate of economic growth does not exceed the rate of environmental pollution and consumption of resources.”

The National Environmental Policy Plan for 2004-2008 (adopted 08.02.2004), which is the background document for Latvian environmental policy, foresees concrete actions for the inventory of polluted and potentially polluted sites, the sanitation of polluted sites, preservation and protection of soil quality, and measures to decrease diffuse pollution by limiting soil erosion and degradation of agricultural lands. Other important legislation documentation related to sustainable land and soil resources management are: (1) The Rural Development Plan (2004 – 2006), (2) The National Environmental Monitoring Program (2002), which includes chapters concerning agricultural land monitoring, forest monitoring and integrated monitoring, (3) The Law on Territory Planning (2002), (4) The Law on Land Use and Survey (1991), and (5) The National Program on Biological Diversity and its Action Plan (2003) etc.

The Rural Development Plan defines Latvian agricultural development for the coming three years (2004-2006). One of the defined goals for the forestry sector is the improvement of environmental protection in forest areas and the afforestation of lands not used and/or less suitable for agricultural purposes.

The Law on Environmental Protection (1991) lays down the main principles of Latvian environmental protection policy, such as polluter-pays and precautionary principles. It defines the competence of the state and the municipal authorities with regard to environmental protection and control as well as their main duties, rights and liabilities.

One of the goals of the Law on Pollution (15.03.2001) is to secure the land from pollution. Subsequent to this law, the Regulations No. 388 of the CoM “Environmental Quality Standards for Soils” (15.07.2003); Regulations No. 365 of the CoM “Regulation on Utilization, Monitoring, and Control of Sewage Sludge and the Compost Thereof” (20.08.2002) were approved.

The goal of the Law on Spatial Planning (22.05.2002.) is promotion of state’s sustainable development by using effective territorial development system. It states that different spatial/territorial plans has to be elaborated at national, regional, district and local municipality level.

The Law On Protection Zones adopted in 1997 stipulates the general provisions for the protection of reservoirs and watercourses with a view to conserve the biotopes of migrating bird species, ensuring of continuity of migration routes as well as maintaining water quality.

On 18 December 2001, the Regulations of CoM No. 531 “On Protection of Water and Soil from Nitrate Pollution Caused by Agricultural Activity” were issued in accordance with the EU Directive 91/676/EEC. These Regulations stipulate the vulnerable territories that are subject to more stringent requirements in respect to water and soil protection from pollution with nitrates from agricultural activity.

The MA and the MoE have accepted the Code of Good Agricultural Practice for Latvia, which incorporates conditions that work against agricultural land degradation.

3.2.4.4. Existing programs and projects

For the enhancement of agricultural competitiveness, the state provides support in the form of subsidies. Pursuant to Section 16 of the Agricultural Law, subsidies may constitute no less than three per cent of the total annual budget expenditure of the country. In 2004, national subsidies are allocated also for the so-called “Land improvement” measure. Under this measure national subsidies are foreseen for the reconstruction and renovation of drainage systems, liming of acid

soils, as well as for the agrochemical analysis. The total amount of the nations subsidies for these activities is 714,793 lats (around 1,074,900 euros).

The main tasks of the Long-term Agricultural Investment Crediting Program adopted by the CoM are to create the long-term financing offers that are acceptable to agricultural holdings, to facilitate investments necessary for creating the farms of optimal size and to facilitate an increase in the competitiveness of agricultural holdings. The Mortgage and Land Bank of Latvia is involved in the implementation of this Program. The Program aims to ensure that Latvian farmers have access to cheaper loan facilities.

As a European Union candidate country, Latvia had access to financial support from the Special Action Program for Agriculture and Rural Development (SAPARD). Financial support has been allocated to Latvia for the time period 2000 – 2003. After joining the EU in 2004, Latvia continues structural reforms, receiving support from the EU Structural Fund – the European Agricultural Guidance and Guarantee Fund (EAGGF).

The project “Developing of soil quality database in Latvia” was realized by the LEA in 2003, stocktaking the following main issues:

Evaluation of soil information necessary for reporting to the EC and evaluation of required information in terms of its availability in Latvia;

Development of the list of Latvian soil indicators, based on the European Environment Information and Monitoring Network (the EIONET);

Preparation of summary on soil information available in the various institutions in Latvia, including the type and amount of information, period of time for which information is available, data carrier and other available data.

In recent ten years there has been several large-scale projects about soil resources global auditing and evaluation, and unifying different monitoring researches in the world and in the Europe. Representatives from Latvia, mostly from academic organizations, had taken part in the several EU, FAO and other projects:

Development of digital world soil and relief database SOTER (supported by the FAO);

Development program of EU soil map in scale 1: 1 000 000;

Development program of EU analytical database of soil (JRC program EC XII Directorate General);

Soil and Relief pollution risk assessment database for Central and Middle European countries (SOVEUR: Mapping of Soil and Terrain Vulnerability in Central and Eastern Europe).

3.2.4.5. Selected Principal Causes

Integrated sustainable land management approach historically was not a priority for state policy until ratification of UNCCD and initiation of this approach at the EU level.

See section 3.6.

Lack of rationalized land management policy to adequately address the escalating degradation of rural land and lack of overall sustainable land use strategy and policy guidance.

Despite the fact that key sectoral policies are in place, e.g., in areas of agriculture and forestry, issues of land degradation have been largely neglected and, consequently, principles of sustainable land management are not adequately reflected in these policies. The historical lack of integrated soil management approach is contributing significantly. There is a need for legislative and policy changes to adequately reflect UNCCD objectives.

Lack of officials dealing with the integrated land management issues in the MoE and restricted financial ability of the MoE to attract competent experts.

Although the MoE has appointed the NFP to keep responsibility for the implementation of the UNCCD, this is unsatisfactory to proceed in line with international initiatives, to set national policy for soil protection and to coordinate the integration of the sustainable land management practices into sectoral and regional policy documents. The deep expertise and scientific knowledge are needed for the setting the national soil protections objectives in accordance with the UNCCD (and recent EU soil policy initiatives as well), therefore strong collaboration and teamwork of soil experts and officials of the MoE dealing with soil matters is the prerequisite. According to opinion of respondents, this is one of the reasons that impede the successful implementation process of the UNCCD.

Poor inter-ministerial collaboration over the land issues and poor information management practice.

There is a lack of co-operation concerning land management issues among various ministries and various institutions (specified in section 8.4.2.). Good cooperation could help to solve the problem of soil information availability and consistency in different institutions. Information on many land degradation issues, like soil erosion, soil sealing and soil pollution is unavailable, insufficient, or incomplete. Existing soil information is collected and stored in different state or municipal databases (digitally or manually) without possibility to compare and inter-correlate it and made it available for users not familiar with these data.

Considerable financial allocations in restoration of degraded land, the growth of the agricultural production and forestry and rural infrastructure but limited financial and technical investments in sustainable land management practice and environmental protection.

Considerable amount of money is allocated from the national budget and EU structural funds for land improvement (including liming, water management etc.), for development of agricultural production and forestry as well as for development of modern rural infrastructure. On the other hand, inadequate allocation of financial resources by the government for soil and land protection and sustainable land management (for example, in the year 2004, only 0.9% of the total funding of the Latvian Environmental Protection Fund was foreseen for this purpose) remains an issue. One of the reasons is absence of adequate economic and financial instruments to support sustainable land management practice. No attempts were made to develop innovative funding mechanisms and scenarios at local, municipal level, based on partnerships and collaborative funding principles.

Low awareness of land degradation significance among all stakeholder groups and general public.

There are insufficient allocations for training of land users, especially of small-holder, subsidiary land users about properties of soils and sustainable land management practices and awareness rising in relation to sustainable land management.

3.2.4.6. Key Barriers

Small-scale holdings and a great number of owners and tenure-rent relationships in both, the agricultural and forestry sectors.

It is difficult to affect the subsidiary farms, which are operated by part-time farmers or used to produce agricultural products for local use, to apply sustainable land use. This barrier exists due to insufficient economic and educational capacity and because they are outside of the most promotion programs, e.g. environmentally targeted subsidies, etc.

Inadequate legal and economic incentives for sustainable land management.

High rural unemployment and lack of available alternatives to key production sectors of agriculture and forestry, the widespread tenure-rent relationship of land ownership and overly

fragmented land are important factors that considerably strain measures to implement sustainable land management techniques and limits the incentives for soil conservation and investments in land productivity. Low rural incomes and high rural unemployment rates also limit implementation of resource-friendly technologies, which could provide long-term gains. Thus the current legal incentives and governmental support are not adequate to address land degradation. No incentive measures to promote innovative management practices such as consolidated drainage system management or other to reverse land degradation and support sustainable land management practice.

Outdated soil information, lack of appropriate soil research and monitoring.

The fact that solely different methods from internationally recommended are traditionally used in Latvia for soil descriptions, diagnoses and classification are facing difficulties to participate in soil protection initiatives internationally (e.g. cooperation projects). There is a big volume of data accumulated in Latvia (soil descriptions, maps), however not in the format that wouldn't allow using it with modern technology (see also the in-depth analysis of capacity "Existing soil monitoring is inadequate and requires a more comprehensive and integrated approach"). This barrier is very significant because there are no permanent monitoring and regular up-dating of established databases; no priorities are defined to collect necessary information in the future; and no clear ideas about desirable standards of soil information system are approved.

Local and regional authorities lack expertise and methodological aids for sustainable land-use planning and management.

Low awareness of environmental issues amongst decision makers of municipalities is very important aspect because local municipalities take decision how to use their territory when elaborating TPs and detailed plans. Small municipalities have no capacity to attract environmental experts and therefore awareness of environmental issues is low, apart from sustainable development concept.

Insufficient funding availability for R&D to promote sustainable land management, including soil monitoring, studies of degraded areas and their rehabilitation.

The state funding for R&D is crucially low and this leads to the unwillingness of the key agencies (int. al., the MoE) to prepare state procurement programs dedicated to land degradation and monitoring issues. There is no permanent state budget for theoretical research at all. This is the obstacle that hinders research and development to promote sustainable land management, including soil monitoring, studies of degraded areas and their rehabilitation nature sciences, and other topics. Quite significant research is done mostly with international support and within collaboration projects.

3.2.5. Insufficient capacity and financial resources to prepare the Implementation Strategy (National Action Plan) for implementing the UNCCD

3.2.5.1. Background

According to the United Nations Convention to Combat Desertification (UNCCD), the National Action Plan (NAP) for reaching of the goals of convention should be developed in close interlinkage with other efforts of national policies for sustainable development (plans, programs, action plans etc.). The purpose of NAP is to address in an appropriate manner the various forms of land degradation, desertification and drought affecting the country (according to the Annex V of the UNCCD).

As it is stated in the text of convention “the NAP shall specify the respective roles of government, local communities and land users and the resources available and needed. They shall, *inter alia*:

give particular attention to the implementation of preventive measures for lands that are not yet degraded which are only slightly degraded;
require regular review of, and progress reports on, their implementation.”

While Latvia is not facing problems of desertification and droughts, land degradation is the significant problem and requires due attention. The main type of land degradation is erosion caused by, both wind and water, including erosion of the Baltic Sea coast. The total extent of water-eroded soil is estimated at 17.3 % from the total agricultural land (0.43 mil. ha) from which 12.5 % fall into slightly and 4.8 % into medium and strong erosion classes.\

3.2.5.2. Institutional framework

The Ministry of Environment (MoE) and its subordinated institutions are implementing environmental policy in Latvia, including prevention of land degradation. For the implementation of the UNCCD in Latvia the main responsibility lies on the MoE, the national focal point for coordination of convention is set in the Department of Environmental Protection of the MoE.

There are several other institutions that are dealing with land use, int. al. soil management matters. Agricultural policy is competence of the Ministry of Agriculture (MA) and its subordinated institutions.

The State Land Service (SLS), the institution supervised by the Cabinet of Ministers and subordinated to the Ministry of Justice, performs administration of real estate, territorial inventory (cadastre) and visualization of geographical territorial information (geodesy and cartography). Accordingly to law “On State Land Service”, the Service executes a list of tasks related to management of land resources: (i) execution of state land settling; (ii) co-ordination and management of development of land cadastre and geographic information system; (iii) providing of this information to state, legal and private persons; (iv) co-ordination of scientific study directions; and (v) land supervision and land use control.

There are two state universities - the Latvian University of Agriculture (particularly the Faculty of Agriculture) and the University of Latvia (particularly the Faculty of Geography and Earth Sciences) that provides scientific capacity for land issues in Latvia. Scientific staff from both of mentioned universities represents Latvia in international projects (SOTER, SOVEUR, etc.).

3.2.5.3. Selected Principal Causes

Integrated sustainable land management (including soil protection) approach was not a priority for state policy until ratification of UNCCD and initiation of this approach at the EU level.

One of the reasons is that soil pollution is not so “visible” and usually not as high-profile an issue as other environmental problems; pollution spreads mainly underground, but desertification is not a problem for Latvia at all. All these aspects succeed thinking that land degradation is not so critical problem as more common water and air pollution, covered by strict implementation demands of EU legislation, international conventions, and treaties. Because the strict time frame for the implementation of the UNCCD is not set, sustainable land management approach is delayed. Land degradation is addressed as separate problems dismissing sustainable management and protection of soil resources and preventing from integration of the sustainable land management into sectoral, local and regional policies.

See also section 3.6.

Lack of awareness/support amongst key decision-makers to phase in integrated land management approach.

Ratification process of the UNCCD showed that awareness on land degradation and integrated land management issues was low among both, decision makers and general public.

Insufficient number of positions provided for work with the land management issues in the MoE.

Currently, there is only one official, who deals with land management issues in the MoE. At the same time, this official works also as the NFP of the UNCCD. Some other officials deal with some aspects of land management issues (e.g., potentially polluted sites, etc.) in their daily work. This amount of human resources is far a way from sufficient to develop and to implement the NAP of the UNCCD and to deal with requirements in the drafts of the recent EU soil policy initiatives (e.g., Soil Framework Directive). Current situation is unsatisfactory because very often the drafting of documents/positions to represent Latvian interests in this field internationally has been done voluntary by the scientists.

3.2.5.4. Key Barriers

Restricted financial possibilities of the MoE to attract competent professionals.

The low wages prevent attraction of high-qualified soil experts in the MoE. There is only one expert dealing with soil matters as a NFP of the UNCCD. For the implementation of the convention and of the recent EU soil policy initiatives it is necessary deep expertise and scientific knowledge. Current situation is unsatisfactory because very often the drafting of documents / positions to represent Latvian interests in this field internationally has been done voluntary by the scientists.

A real collaboration mechanism among soil experts, involved institutions and the MoE (including the NFP) is not established.

All respondents remarked insufficient and onerous co-operation concerning land management and soil protection issues between various institutions and ministries, because collaboration mechanism is not established. Insufficient collaboration among experts and institutions that they represent is indispensable to prepare national reports to the Secretariat of the convention (e.g. information processing and exchange) and represent Latvian position in the EU. According to opinion of respondents, this is one of the most significant barriers that delays implementation process of the convention.

Lack of comprehensive assessment of existing situation.

To undertake development of the UNCCD the NAP the inventory of existing situation is needed. Detailed stocktaking and stakeholder analysis are necessary for NAP preparation. Currently there are no inventory prepared through consolidation of available information concerning the country's land degradation situation in the areas of current or future soil erosion, decline in organic matter, soil contamination, soil sealing, soil compaction, decline in soil biodiversity, and facilitation of floods and landslides.

Lack of actual and updated information.

Information on many land degradation issues, like soil erosion, soil sealing and soil pollution is unavailable, insufficient, or incomplete. In some cases restricted access to available information or user-unfriendly databases delays to use it. Moreover, local and regional authorities lack expertise and methodological aids for sustainable land-use planning and management. There is still unfinished inventory of polluted sites that is one of the goals set in the NEPP for 2005, and processing of some actual information is still not finished, e.g. land supervision (1992. – 2001.)

realized by the State Land Service, geochemical assessment and mapping of soils, mother rocks and geochemical characteristics performed by the State Geological Survey.

3.3. Biodiversity Conservation

3.3.1. SPNT-related compensation and incentive programs for landowners are not fully operational and / or sufficiently understood by key stakeholders

3.3.1.1. Background

In Latvia, 636 specially protected nature territories (SPNTs) (including 336 NATURA 2000 sites) have been established with a total area of 11,9% of the state territory (except territory of the Ziemeļvidzeme Biosphere Reserve, which lies 7 % of countries' territory). The average proportion of protected areas in the EU member states reaches 11%.

All NATURA 2000 sites will benefit from the most appropriate national legal status and the same requirements as for nationally protected territories will apply, including certain restrictions of economic activity. For example, for sake of nature protection forestry activities are restricted in 2.7% of the Latvian territory. The main restrictions for land use in specially protected nature territories are:

- Restrictions for land transformation (building);
- Forestry management restrictions;
- Agricultural management restrictions;
- Restrictions to divide the land properties (the land plots).

Uncompensated limitations on forestry are determined with respect to 377.8 thousand ha of area aimed at fulfilling the nature protection and environmental functions by regulatory enactments, which is causing economic loss to forest owners. The compensation of losses is expected to motivate the private forest owners to protect the nature and to observe the environmental requirements.

3.3.1.2 Institutional framework

Institutions subordinated to the Ministry of Environment – the Nature Protection Board and the administrative structures of SPNT are responsible institutions in charge of nature conservation and management of SPNTs. From a management point of view there are three main categories of SPNTs:

- (1) Three national parks and one nature reserve, which have their own administrative structures. The administrative structures of SPNT are responsible for development of Nature Protection Plans (NPP) for their territories and for implementation of these plans;
- (2) Ziemeļvidzemes Biosphere Reserve, which also has a separate administrative structure. The territory of this reserve occupies 7 % of the countries' territory;
- (3) Other more than 620 SPNTs, which do not have their own administrative structures. For their management, including development of nature conservation plans and implementation of these plans, responsible is Nature Protection Board, which is located in Rīga.

Different owner groups own the land in SPNTs – private landowners, the State stock company “Latvia’s State Forests”, municipalities, sometimes even other ministries, church etc. There is no available data on the percentage of each of this landowners' category.

The Rural Support Service is institution subordinated to the Ministry of Agriculture. This institution is responsible for management of the European Agricultural Guaranty and Guidance

Fund (EAGGF), including subsidies for landowners of agricultural land in the SPNTs. In order to increase income from tourism in SPNTs, one activity is planned from EU structural funds – Development of ecotourism in NATURA 2000 areas. This activity is implemented as national program. Currently, the Ministry of Environment has prepared the national program, which includes 7 projects.

3.3.1.3 Legislative/Regulatory Framework

The *National Environmental Policy Plan 2004 – 2008* in the chapter “Biodiversity” as one of the tasks states “A compensation mechanism for losses incurred by land owners through restrictions on economic activity in protected areas has been developed and implemented”.

The *Development Strategy of the Ministry of Environment (2005-2007)*, which is currently the draft version, states that the conservation of biological diversity and development of network of SPNTs as one of the activity directions for the coming years. In this strategy is also foreseen that the necessary financial resources for compensations according to the draft *Law On Landowners’ Rights to Compensations for Restrictions of Economic Activities in Protected Territories* are 1 million lats in 2005, 1,5 million lats in 2006 and 2 million lats in 2007.

The *Law On Landowners’ Rights to Compensations for Restrictions of Economic Activities in Protected Territories*, which is repeatedly reviewed in the in the Parliament, foresees:

- The provisions to assign for the compensation (the main responsible institution – Nature Protection Board);
- The procedure how the amount of compensation will be estimated and granted;
- The procedure of exchange the private land inside the SPNT with equivalent municipal or state land outside the SPNT (the main responsible institution – State Land Service).

The current draft of law includes the compensations for restrictions of economic activities in SPNTs and microreserves.

The subsidies for landowners of agricultural land located in the SPNT are paid from EU structural funds according with the Rural Development Plan 2004 – 2006.

The law *On Specially Protected Nature Territories* (1993) in Article 29 envisages decrease of real estate tax for forestry management restrictions in the specially protected areas.

Other legislation acts, which set restrictions for land use in specially protected nature territories, are:

- *Law On Specially Protected Nature Territories* (1993);
- Regulations of Cabinet of Ministers *On the General Protection and Use of Specially Protected Nature Territories* (No 415/ 22.07.2003);
- *Law On Protected Belts* (05.02.1997);
- *Forest Law* (17.03.2000);
- Regulations of Cabinet of Ministers *Nature Protection Regulations in Forest Management* (No 189/05.05.2001).

3.3.1.4. Selected Principal Causes

Not all farmers are informed about possibilities to get subsidies.

Although the responsibility for management of SPNTs lies on the MoE, the Rural Support Service (subordinated to the Ministry of Agriculture) () administrates the EU subsidies foreseen for this purpose. The information of farmers about all subsidies is responsibility of Rural Support Service. One respondent stressed that information for the available subsidies mainly receive those farmers who are actively seeking for such information themselves. There is insufficient

information for all “ordinary” farmers. But in this particular case the Nature Protection Board and the administrative structures of SPNTs are institutions, which know better the landowners of SPNT and could inform them directly. Currently, the MoE and the Nature Protection Board inform on possibilities to get subsidies in their websites and mainly it is a voluntary initiative of these institutions because of lack of mandate and lack of resources for these activities. Also we should take into account that many farmers do not have Internet access. This causes the lack of targeted information campaign for landowners of SPNT about their possibilities for subsidies.

The Law On Landowners’ Rights to Compensations for Restrictions of Economic Activities in Protected Territories is not accepted by Parliament yet.

The main reason is usually slow endorsement process of very costly legislation. In such cases political agreement between at least coalition parties should be reached.

Lack of awareness about compensation mechanisms in SPNTs of high-level decision makers in Cabinet of Ministers and Parliament.

This causes the slow process of formal endorsement of the *Law On Landowners’ Rights to Compensations for Restrictions of Economic Activities in Protected Territories*, realization of which demand many financial resources, by the Government and Parliament. One respondent stressed that awareness can be raised only after the Draft Law is passed to the Government and Parliament because high level decision makers, due to the time restrictions, usually start to be interested in some questions only after they come in their agendas [as prepared and submitted draft law].

The lack of necessary cartographic material, necessary for payment of the subsidies for landowners in “old” SPNTs.

The Rural Support Service does not pay subsidies for private landowners of agricultural land in SPNTs established before the NATURE 2000 sites due to the lack of exact cartographic material. Currently, only NATURA 2000 territories are prepared in the form of digital map in scale 1:10 000. For other SPNTs such information is not digitized and mainly is in form of border description that is outdated and need to be verified in nature. There is agreement between ministers of both, Minister of Agriculture and Minister of Environment, that Ministry of Agriculture will prepare a project proposal for Latvian Environmental Protection Fund to address the problem and to prepare necessary information.

3.3.1.5 Key Barriers

The bureaucracy that must be navigated and the huge amount of documentation that must be prepared to apply for subsidies.

This is also important factor why the farmers, which even know about possibilities to get subsidies, are not interested to apply for them. There are also landowners of SPNTs, which live in other places (even in other region of Latvia) and lack the interest to do anything with their land, except to receive compensations for these lanes.

The Draft Law On Landowners’ Rights to Compensations for Restrictions of Economic Activities in Protected Territories addresses only compensations for forestlands in SPNTs.

Landowners believe that SPNTs are only temporary, legal fictions that will evaporate once any level of economic pressure is felt nationally or locally. There exists distrust to the compensations because they are aware that amount of compensation cannot be adequate in comparison with the foreseen income from economic activities in future. Many landowners believe that, due to the expected deficit of building plots, the some areas even in SPNTs will be transformed and building will be allowed. In such case they could sell their land and receive many times higher income than any compensation.

Relatively high percentage of SPNT from total territory of Latvia (11,8%).

Although this percentage is near to an average of “old” EU countries, it is very high for relatively under-developed new member state like Latvia. Some territories, which are included in SPNT are landscape reserves in Gauja National Park etc. – where at least some commercial activities could be allowed.

Only a small number of SPNT have facilities for visitors.

The specially protected nature areas are important tourism resources of Latvia that are open to the visitors. The SPNT are significant tourism resource due to the previously mentioned fact that they occupy approximately 11,9% of the state territory.

3.3.2. The SPNT management mechanism/system is inadequate, particularly with respect to the integration of existing regional and municipal authorities

3.3.2.1. Background

In Latvia, 636 specially protected nature territories (SPNTs) (including 336 NATURA 2000 sites) have been established with a total area of 11,9% of the state territory (except territory of Ziemeļvidzeme Biosphere Reserve). The average proportion of protected areas in the EU member states reaches 11%.

The NPP for each of SPNT have to be elaborated setting administrative, nature protection and other necessary measures, as well as the division of the territories into zones in conformity with the protection and utilization measures to be carried out in such territories. NPP in force is document that has to be considered when Territorial Plans are developed. At this point strong collaboration among environmental institutions (particularly Nature Protection Board or Administrations of SPNT) and municipalities is indispensable.

3.3.2.2. Institutional Framework

Eight Regional Environmental Boards (Daugavpils, Jelgavas, Lielrīgas, Liepājas, Madonas, Rēzeknes, Valmieras un Ventspils), which are subordinated to the Ministry of Environment (MoE)¹⁰, control compliance of management activities with normative acts (carry out inspection) in those SPNTs that do not have their own administrative structures. In the SPNTs, which have their own administrative structures, the inspection is carried out by these structures. This control (inspection) function is supervised and methodologically guide by the Environmental State Inspectorate (institution subordinated to the MoE). The Environmental State Inspectorate participates also in the actual control of the conservation and use of SPNTs, protected species and biotopes.

Different owner groups own the land in SPNTs – private landowners, State stock company “Latvia’s State Forests”, municipalities, sometimes even other ministries, church etc. There is no available data on the percentage of each of these landowners. The SPNTs are located in 281 (from 517) local municipalities. Currently, the main factor of successful cooperation in regional / local level is interested and “positively minded” municipalities. Such municipalities find the resources for management of SPNTs including development of tourism infrastructure. The Nature Protection Board assists on the bases of contracts some municipalities in development of tourism infrastructure.

¹⁰ According to MoE Development Strategy for year 2005- 2007, since 1st of January, 2005 all regional environmental boards are joined in newly established institution- the State Environmental Service.

3.3.2.3. Legislative/Regulatory Framework

The Law On Specially Protected Nature Territories specifies the basic principles for a system of specially protected nature territories; procedures for the establishment of SPNTs and secure their existence; and procedures for the administration of SPNTs, for control of the condition of such territories.

The NPP, are developed for a specified period of time in conformity with recommendations of the MoE. NPP determine administrative, nature protection and other necessary measures, as well as the division of the territories into zones in conformity with the protection and utilisation measures to be carried out in such territories. The Minister of Environment approves NPPs. The NPPs are binding on territorial planning at all levels.

In the process of development of the NPP corresponding municipalities are informed and involved. Usually the municipalities take part in this process because the nature conservation plan should be taken into account when they develop their territorial plans. Although one respondent considered that even in the process of development of NPP cooperation is not sufficient enough.

The National Environmental Policy Plan 2004 – 2008 in the chapter “Biodiversity” states the following tasks related to the management of SPNT:

- (0) Proper management ensured and a control system established in specially protected natural territories at the European and national levels;
- (1) A network of capable regional environmental protection institutions established;
- (2) Environmental protection plans and individual regulations for the protection and use of specially protected species and natural territories at Latvian and European level have been developed and implemented;
- (3) Community is getting involved in the implementation of environmental protection measures and is informed of the results thereof.

The Development Strategy of the Ministry of Environment (2005-2007), states the conservation of biological diversity and development of network of SPNTs as one of the activity directions for the coming years. The strategy foresees also development of regional structures of the Nature Protection Board in 2006 and, based on the experiences gained, delegation the management functions of SPNTs to the municipalities and NGOs.

3.3.2.4. Selected Principal Causes

Although the formal responsibilities of key stakeholders involved in the management of SPNTs are set in the legislation, there is no concrete state strategic vision on real implementation of the management.

The responsibility for development implementation of NPP lays with the Nature Protection Board and on the administrative structures of the SPNTs. For the actual implementation of the management activities in the SPNTs landowners are responsible. The role of municipalities in SPNT management is typically not defined, except the case when the municipality happens to be the landowner. Some respondents considered that the responsibilities between the administrative structures of SPNTs, the Regional Environmental Boards, and the Environmental State Inspectorate are not clear divided and some overlapping of functions is possible (e.g., control of management of the SPNTs is function of both, the administration of particular SPNT and the Environmental State Inspectorate).

Only some SPNTs have their own administrative structures, which are located in this territory and can in the daily work involve local municipalities and local community.

The Nature Protection Board is directly responsible for the management of SPNTs, which do not have their own administrative structures (together more than 620). The Board has a total staff 16 persons and its office is located in Riga. The specialists are constrained from traveling on a regular basis to the particular territory for which they are responsible for time and budgetary reasons. Thus, it is difficult to work effectively with municipalities to explain the significance of different management options for conservation of SPNTs and to coordinate these management activities. Though the specialists of Nature Protection Board do travel intensively throughout Latvia, they mainly visit those territories for which NPP are elaborated and discussed with all involved stakeholders at local level. Also sometimes the specialists from Nature Protection Board are considered in some municipalities as “an official from Riga” but not as a resource person designed to help with the management of SPNTs.

Not all landowners know the management options of their land located in the SPNT.

Two respondents mentioned their experience that landowners (private persons, municipalities, etc.) think that any activity is prohibited in the SPNTs. This indicates that at least some landowners are misinformed on their responsibilities / possibilities of different management options on land in SPNTs.

Related compensation and incentive programs for landowners are not fully operational.

Many landowners in SPNTs view the requirements of specific management activities as an unwelcome intrusion, which are applied by the state against their interests. See section 9.1. for further analysis.

Lack of competence and willingness in controlling institutions (e.g., the Environment State Inspectorate¹¹) to take firm enough decisions against the persons, which contravene with management requirements in particular SPNTs.

Some respondents mentioned even the cases when the Environment State Inspectorate¹² and even the court inflict penalties, which is very weak for the amount of harm to the SPNTs.

Not all municipalities have environmental specialist.

Because of financial limitation local municipalities have no possibility to attract environmental experts. This problem is especially acute for small municipalities.

Lack of competence and willingness in both, the municipalities and the administrative structures of SPNTs, to cooperate and to develop common projects for appropriate management of SPNTs.

Many SPNTs are still lacking NPPs.

There are 632 SPNT; but currently only more than 50 NPPs are approved. The NPP elaboration rate is rather slow and the main reason for this is insufficient financial resources and human capacity. The latest developments show that some contribution to this makes EU Life project funding and other foreign donors (like, Germany Environment Protection Agency).

In order to increase income from tourism in SPNTs, one activity is also planned from EU structural funds – Development of ecotourism in NATURA 2000 areas. This activity is implemented as national program; the MoE has prepared the national program, which includes 7 projects.

¹¹

¹² According to the MoE Development Strategy for year 2005- 2007 since 2005 Environment State Inspectorate is reorganized and its functions is overtaken by the State Environment Service

3.3.2.5. Key Barriers

The most of the lands in the SPNTs are owned by private land owners.

Although the state has preemption rights in the case when private landowner sells his (her) property, only administration of Teiči Nature Reserve has repurchased a significant amount of the land of SPNT from private landowners. It was possible thanks to the financial support from EU Life Nature program. In other SPNTs, which have their own administrative structures, private landowners own most of the lands. But Nature Protection Board, which is responsible for rest of the SPNTs has no land in its property. The experiences from other EU countries (e.g., Sweden) show that most of the lands in SPNTs are state property.

Two different ministries now supervise environmental protection and regional development respectively.

Collaboration between the Ministry of Regional Development and Local Governments (MRDLG) and the MoE is find insufficient and should be strengthened. MRDLG is responsible for the planning policy; int. al. coordination of the development of all level Territorial Plans (TP). The NPP is binding to all level TPs. This has lead to lack of cooperation and coordination of the management issues in SPNTs at the national level.

Relatively high percentage of the SPNTs from total territory of Latvia (11,9%).

The total area of SPNTs in Latvia is near to an average of “old” EU countries. However it might be considered very high for a country like Latvia. This leads to the situation when some stakeholders in regional and local level feel like the SPNTs are established unconsidered and they are too many without considering the compromises between the nature conservation objectives and economic development needs. Another aspect of this barrier is that it will be too expensive to manage them appropriately.

Development of the NPP for particular territory is not financially linked with the implementation of this plan.

For many territories nature conservation plans are developed but they leave on paper because of lack of finances to implement them. Although management activities foreseen for the concrete time period should be implemented at that time, because in many cases they will not be more appropriate options even after two or three years.

The management of SPNTs is not included adequately in the territorial plans that lead to planning and implementation of unsuitable development of these territories.

The State stock company “Latvia’s State Forests”, which is largest forest owner in SPNTs very often acts like a private landowner who is mostly interested in the profit from forest but is not concerned about the nature values.

The company performs the ownership function in relation to the management and protection of the state owned (public) forests. The principal task of LVM is to ensure to the forest owner and the public the maximum benefit that can be achieved by sustainable managing the forest property entrusted to it. Although the company devotes some resources for nature protection activities sometimes economical interests are set prior the nature conservation.

3.4. Climate Change

3.4.1. Existing air protection programme does not adequately incorporate global environmental considerations

3.4.1.1. Background

Although Latvia's political, legal and institutional systems correspond to the internationally accepted ones, an analysis of capacity constraints concerning United Nations Framework Convention on Climate change (UNFCCC) has identified that existing air protection programmes does not adequately incorporate global environmental considerations. There is a set of political documents (strategies, programmes, action plans) developed where air protection issues are included:

The Strategy for Action of the Ministry of Environment for 2005.-2007.;
National Environmental Policy Plan 2004 – 2008 (Policy Plan);
Basic Guidelines for Sustainable Development of Latvia;
The National Environmental Monitoring Programme (NEMP);
Action Programme for Reduction of National Air Emission Ceilings;
Policy Plan for Reducing of Climate Change;
National Emission Allocation Plan for 2005-2007;
Strategy for joint implementation projects for Kyoto Protocol under UNFCCC (2002-2012).

Every document incorporates several air protection and climate change issues generalised in the NEMP. The aim of the NEMP is to establish an environmental monitoring information system in compliance with requirements of international environmental conventions, legal system of European Communities (EC) and national legislation. This would be the basis ensuring general public, decision makers, institutions and authorities, international and national experts with actual, intrinsic, respectively focussed and high quality environmental information.

There are adopted action plans for implementation of the NEMP in the sector of the protection of surface waters, biodiversity and terrestrial areas but there are not defined most of actions necessary for step-by-step introduction and implementation of requirements according to air protection. Regarding terms for actions performance, costs and eventual sources of financing are not stated.

3.4.1.2. Institutional Framework

The relevant institutions responsible for elaboration of environmental legislation and implementation of requirements regarding air protection are¹³:

- Ministry of Environment (MoE)
- Latvian Hydrometeorological Agency (LHMA)
- Latvian Environment Agency (LEA)
- State Environmental Service (newly re-organised structure)
- The Ministries of the Republic of Latvia (Ministry of Agriculture, Ministry of Economics, Ministry of Finance, Ministry of Transport, Ministry of Regional Development and Local Governments, Ministry of Education and Science).

¹³ According to the MoE Development Strategy for the year 2005- 2007, the Latvian Environment Agency, the State Geological Survey and the Latvian Hydrometeorological Agency was reorganized and the Latvian Environment, Geological and Meteorological Agency (LEGMA) established instead; all functions of these institutions now is under the LEGMA authority.

The MoE is the central executive institution in the area of environmental and nature protection implementing Government supervision and control and providing Government support in areas within its authority. MoE prepares and implements a national policy for environmental protection, nature protection, preservation and rational use of natural resources, planning of regional development, development of tourism, hydrometeorology, construction, housing and exploitation of subsoil and also draft legal acts within its jurisdiction. The range of activities of MoE is characterised by consistently growing functions due to the entrance in the EU and growing interest of general public to the environmental problems. Two structural units - Department of Environmental Protection and Climate and Renewable Energy Department are dealing with air protection problems, which is a newly formed unit. This unit will develop capacity of staff in the MoE and will promote co-operation with scientific institutions and industry associations as well as adjustment of financial investments from EC to facilitate development of cleaner technologies in production. This will promote implementation of Lisbon strategy objectives in Latvia.

The Latvian Hydrometeorological Agency⁹ provides meteorological and hydrological observations, ensures integrated monitoring of air quality elaborates meteorological, hydrological and other specialised forecasts and maintains appropriate databases.

The Latvian Environment Agency⁹ is responsible for development of the unified environmental information system, environmental monitoring and testing, data processing and information compilation and assessment. Reporting obligations, dissemination of environmental information as well as annual reports of GHG emissions and removals according to UNFCCC IPCC methodologies are accomplished. Two employees in LEA are involved in preparation of reports of GHG emissions and removals for the whole inventory doing an extra work.

The State Environmental Service controls and supervises the implementation of legislation framework in the area of environment protection and natural resources use in the territory of Latvia, continental shelf, economic zones of the Baltic Sea and the Riga Gulf, territorial waters and inland waters. It also supervises and guides environmental inspector activities of Regional Environmental Boards, Marine Environmental Board and other specially protected nature territories.

The Ministries of the Republic of Latvia (Ministry of Agriculture, Ministry of Economics, Ministry of Finance, Ministry of Transport, Ministry of Regional Development and Local Governments, Ministry of Education and Science) ensures only implementation of separate activities of climate convention conditions in forestry, agriculture, industry, production of energy, transport policy and waste management.

The analysis of relevant environmental policy documents reflects that there is emphasized in the National Environmental Policy Plan for 2004-2008 that conventions and their protocols, which Latvia has signed or accepted, determines state duties and responsibilities also in global scale. The monitoring of air quality and climate change is incorporated in the NEMP ensuring corresponding in quality and quantity atmospheric air observations in compliance with requirements of EU Directives and international conventions. The sub-programme of the NEMP includes quality monitoring of ambient air, monitoring of a long - range air pollution transfer, monitoring of precipitations and monitoring of climate change. To implement requirements of

Directive 2001/81/EC the MoE has elaborated an Action Programme for Reduction of National Air Emission Ceilings where information on current situation, emission prognoses beyond 2010 and prospective actions and measures to reduce emissions in air in different economical sectors – energy production, industry, transport, agriculture, forestry and off-road machinery, household and waste management is provided. Calculations made confirm the ability of Latvia in fulfilment of set environmental goals.

To reduce anthropogenic impacts on climate change and to participate in Joint Implementation Projects, international emission trade and other flexible mechanisms a working group by the MoE is created with the aim to develop a new Policy Plan for Reducing of Climate Change.

3.4.1.3. Selected Principal Causes

Environmental protection is not a priority in governmental policy

The often changes of governments do not facilitate the heritable accumulation of knowledge and information on climate change issues of the decision makers in Latvia. The decision makers are more focused on solving acute economic and social problems. Based on the information gathered, it seems apparent that environmental protection is not a priority in governmental policy in Latvia.

Existing Air Protection Programme is not consistent with emerging EU legislation and priorities.

This is relevant issue because by elaboration of a new Programme a strict time schedule for its updating should be developed. The Air and Climate Change chapter of the NEMP should be complemented with planned actions regarding legislative requirements being in force de novo.

Inability to ensure compliance with all requirements of the EU environmental monitoring .

The financing allocated for environmental monitoring activities is insufficient. It should be mentioned the EU legislative requirements in the air and climate change field should be transposed, adapted and incorporated in the national environmental legislation in a short period of time. This requires an enlargement of staff in structural units dealing with environmental issues in governmental institutions what was not planned until now.

The terms of introduction and implementation of new environmental legislation are too short and blurry

This is a conclusion of several respondents. But this is an objective element of a existing situation after recent entrance in the EU and there is nothing to do. But this brings to a situation when some legislative norms are declarative pro tempore and do not work in reality.

Insufficient institutional co-operation.

Most of the line governmental institutions have incorporated discrete air protection measures in their action plans. But there is necessary to develop institutional collaboration and to cultivate control mechanisms regarding observance of planned measures and documents (programmes, action plans).

The number of branch experts is insufficient

Deficiency of accurate, actual and in-time information about air protection and climate change issues for decision-makers and society was identified. The number of branch experts with international experience dealing with environmental issues being able to prepare required information in a short time is insufficient. The reason could be in a quality of study programmes of the educational institutions and insufficient training possibilities of experts in industrially developed countries. There was pointed out by interviewed respondents that governmental

support in the field of environmental education is needed. The state order for preparing of a planned number of specialists with a requisite profile of environmental education should be developed. The level and quality of knowledge should be defined.

3.4.1.4. Key barriers

Insufficient human and financial capacity

There is an acute and characteristic for governmental institutions situation that often changes in personnel are in place. Employees (especially on specialists level) pass the institutions preferring the job possibilities in private companies and dealing there with the same environmental issues. The reason is stress caused by constantly growing functions to be performed, an extra work and inadequate and insufficient motivators (reward, social preferences). The finance resources planned from the state budget for reward of personnel is completely inadequate and insufficient to recruit new and to keep on experienced employees and specialists. No relevant improvements are stated in this area.

Frequent changes in legislative acts because of the very short and compressed terms for transposition of EU legislative requirements

It is difficult to get any recommendation problem, because the terms are determined by the EC. Hastiness in the issuing of new legislative documents leads to inaccuracies and incomplete documents. Sometimes that is the reason for several Amendments in one and the same legislative document. The orientation in this batch of documentation is a cumbersome procedure for all.

Lack of action plan for the implementation of the Air and Climate Change Chapter of the NEMPA An action plan were concrete measures for the implementation of the Chapter is not developed. It hinders implementation of air and climate change monitoring set by NEMP completely, but it is one of the preconditions to reach compliance with global environmental consideration. According to the MoE Development Strategy for the year 2005- 2007, newly established institution- the Latvian Environment, Geological and Meteorological Agency (LEGMA) is responsible for the implementation of the NEMP.

Increased differences in qualification between environmental specialist who work long time and who start to work and an extra work by training

As there was pointed out by stakeholders the training of new employees at the work place takes a lot of time. In the best case after 6 months training a recruited employee is able for unassisted work. The reason is a unique and specific attribute of air protection and climate change issues. The problem could be that educational institutions are not informed according to knowledge necessary for environmental specialists in this area.

There are not ensured potentialities enough to get environmental information for that part of general public having no access to Internet.

The documents concerning air protection and climate change issues are available in the website of MoE. Unfortunately the role of non-governmental organisations (NGO) to provide and clarify environmental information to the general public is invulnerable. The mass media are not interested and not competent enough to delight environmental issues. The interest is growing if environmental problems affect concrete persons only.

3.4.2. Lack of an operational system (including monitoring and reporting) to facilitate participation in existing or future regional and global GHG trading systems and other flexible implementation mechanisms

3.4.2.1. Background

The problem of lack of a functioning national system to facilitate participation in existing or soon-to-be established GHG trading systems was identified as one of the most significant capacity gaps during the development of the NCSA thematic profile for climate change.

As Latvia has signed and ratified UNFCCC and Kyoto Protocol, the compliance with international requirements and implement Kyoto Protocol (KP) commitments related to the estimation of anthropogenic GHG emissions by sources and removals by sinks have to be reached.

National systems should be designed and operated to enable Latvia as Party included in Annex I of KP to consistently estimate anthropogenic emissions by all sources and removals by all sinks of all GHGs, as covered by the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* and IPCC good practice guidance, in accordance with relevant decisions of the COP and/or COP/MOP.

The objectives of national system are:

- (a) To enable Latvia to estimate anthropogenic GHG emissions by sources and removals by sinks in accordance with Article 7, paragraph 1, and relevant decisions of the Conference of the Parties (COP) and/or the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP);
- (b) To assist in meeting the commitments under Articles 3 and 7;
- (c) To facilitate the review of the information submitted under Article 7 by Latvia, as required by Article 8;
- (d) To assist to ensure and improve the quality of inventories.

National systems should be designed and operated to ensure the quality of the inventory through planning, preparation and management of inventory activities. Inventory activities include collecting of activity data, selecting methods and emission factors appropriately, estimating anthropogenic GHG emissions by sources and removals by sinks, implementing uncertainty assessment and quality assurance/quality control (QA/QC) activities, and carrying out procedures for the verification of the inventory data at the national level, as described in the guidelines for national systems.

According to the UNFCCC provisions and subsequent decisions of the Conferences of the Parties, for the implementation of its national system, Latvia shall:

- (a) Establish and maintain the institutional, legal and procedural arrangements necessary to perform the functions defined in the guidelines for national systems, as appropriate, between the government agencies and other entities responsible for the performance of all functions defined in the guidelines;
- (b) Ensure sufficient capacity for timely performance of the functions for national systems, including data collection for estimating anthropogenic GHG emissions by sources and removals by sinks and arrangements for technical competence of the staff involved in the inventory development process;
- (c) Designate a single national entity with overall responsibility for the national inventory;
- (d) Prepare national annual inventories and supplementary information in a timely manner and

provide information necessary to meet the reporting requirements in accordance with Article 5 and Article 7, paragraphs 1 and 2, and relevant decisions of the COP and/or COP/MOP.

3.4.2.2. Overview of Relevant Activities/Projects

Questions related to climate change are addressed to the MoE, Latvian Environment Agency (LEA Ministry of Economy, Ministry of Finance and Energy Department of the Latvian Development Agency (LDA ED). Two LEA specialists are occupied in the GHG inventory estimation procedure. Estimation the Inventory is carried out in accordance with the Revised 1996 IPCC Guidelines, Good Pract Guidelines and available activity data.

Experts have prepared inventory in cooperation with several institutions. Publications and advice of other experts have been used also. Institutions involved in the inventory procedure are:

- Central Statistical Bureau of Latvia;
- Ministry of Environment of the Republic of Latvia;
- Ministry of Agriculture of the Republic of Latvia;
- Ministry of Transport of the Republic of Latvia;
- State Land Service of the Republic of Latvia;
- Latvian Development Agency;
- State Forest Service;
- Private organizations and companies;
- Other experts from different fields.

This cooperation proceeds in a way that LEA requests for activity data, estimations and assumption or other information from these institutions or separate experts and receives judgments. Latvia hasn't implemented national system for GHG emission inventory and it makes significant difficulties for inventory preparation. But there is no legal document on the national level where appropriate role, duties and responsibilities of institutions or stated by the fulfillment of UNFCCC requirements.

3.4.2.3. Selected Principal Causes

Lack of awareness/support amongst key decision- makers

Many respondents highlighted that actually key decision-makers are not completely familiar with raised problem and simply fail to recognize or understand the importance of some problems and issues concerning data collection, estimation, and capacity.

Lack of financial and human capacity to design, develop and operate National system for data collection, calculation and for GHG emissions trading

The existing institutional capacity (staff, finances) is insufficient in order to comply with all Climate Change convention requirements. The human capacity is more than deficient. To comply with all annual GHG inventory and to prepare National Inventory Report there are employed only two persons in LEA on seven GHG emission source categories (economic sectors) while in most

¹⁴ According to the MoE Development Strategy for the year 2005- 2007, the Latvian Environment Agency, the State Geological Survey and the Latvian Hydrometeorological Agency was reorganized and the Latvian Environment, Geological and Meteorological Agency (LEGMA) established instead; all functions of these institutions now is under the LEGMA authority.

of EU countries with one source category are occupied one or more institutions including institutes with good research and technical provisions.

Insufficient coordination between LEA, ministries and other institutions.

This problem is due to lack of one coordinator (institution) which would facilitate cooperation amongst all in the GHG emission inventory involved institutions. Establishment of National system would resolve this problem.

Lack of branch experts and experts with international experience (by number and qualification).

There is lack of experts who are familiar with UNFCCC methodologies and requirements. In some economic sectors there are no branch experts at all, for instance in the Industrial processes sector-HFCs and PFCs production and consumption.

Due to lack of persistent financing it is not possible to employ necessary number of branch experts. There is need for experts with international experience who would understand climate change issues in detail and could advise local experts.

3.4.2.4. Key Barriers

No explicit official mandate for institutions to refer in order to collect and calculate data required by UNFCCC. It means lack of laws and regulations defining responsibility of economic sectors for collecting of data and calculating GHG emissions and removals for preparation of annual report

Up to date there is not any binding document defining co-operation between national institutions on Climate Change issues implementation. According to a Regulation No. 462 of Cabinet of Ministers issued in year 1995, the competent authority for implementing UNFCCC was delegated the Ministry of Environment (former Ministry of Environment Protection and Regional Development). Moreover several ministries had to designate contact persons for Climate Change convention implementation. Unfortunately, the second point of this rule does not work in reality, because of weak involvement of institutional leadership (top management).

Current human capacity cannot handle new requirements, especially in GHG emissions calculation and preparation of GHG annual reports

Only two employees of LEA are dealing with climate change issues; it means that for climate change time limit is approximately one half of all working hours. Taking into account this situation it is hard to implement new requirements however since joining to EU the work amount is increased considerably.

Inadequate reward in the environmental sector in the governmental institutions

The problem of inadequate reward in the environment protection sector is essential. Salaries of state employees in the environment sector are not comparable with the private sector despite the high responsibility and overwork.

Lack of persistent funding from state budget for environmental monitoring (Insufficient or inconsistent levels of funding for environmental monitoring and data collection)

It is not enough to develop monitoring and data collection as a project based activity. There should be persistent funding from state budget for monitoring and activity data collection what includes specific researches on calculation methods and emission factors.

Insufficient number of staff participating in existing or future regional and global GHG trading systems and other flexible mechanisms

Starting from 1st January, 2005 new State Agency- Latvian Environment, Geological and Meteorological Agency is established, by joining Latvian Environment Agency, Latvian Hydrometeorological Agency and State Geological Survey of Latvia. The future capacity of this new structure is unclear and is very hard to predict. This capacity barrier was identified in the previous stages of this project. At the moment some changes has been made and the situation has improved. This problem could also resolve the new structures of MoE.

Insufficient scientific basis for developing information essential for national reports, no researches, particularly lack of branch experts, technical provision, lack of regular government order for researches and financial support

During the first phase of this project these capacity findings were estimated as medium important. Nevertheless it is more complicated question because some researches for GHG emission data are essential. Besides the problem is that they are project based activity without continuity. A barrier is also that climate change issues based on one expert opinion were not included in NEMP. Due to lack of information on Climate Change issues and financial resources no specific permanent support was developed. Some separately researches in the frame of annual inventories were organized thanks to special projects.

Insufficient number of professionals participating and representing Latvia in international working and steering groups dealing with climate change issues, particularly participation in the working groups of Climate Change Committee

As respondents pointed out the main problem of human capacity is lack of experienced and trained experts in the Climate Change issues. Since the 1st of October, 2004 the structure of the MoE has been changed. The new Climate and Renewable energy department with two divisions is established (planned number of employees are 11 people in the department, inter alia in the Climate Policy division will be 4 employees). Currently only two to three persons is experienced in this field and new staff training could last 1-3 years.

Lack of awareness/support amongst key decision- makers in all levels

This point is like a key between individual and institutional level. Without complete understanding of the problem the key decision maker in the institutional level cannot sufficiently represent the needs of his institution to the higher level.

Lack of quality assessment and quality control system (QA/QC) for preparation of annual calculations and reports about GHG emission and removal.

The QA/QC system is required by UNFCCC COP decisions regarding National system designing, as well as Convention on Long –range Transfer of Air Pollution and European Community. The lack of QA/QC system is essential for good and complete GHG emission inventory.

3.5. Environmental Information System and Monitoring

3.5.1. In depth analysis for the capacity constraint “Lack of an official, integrated Environmental Information System including GIS component and an Internet- based environmental portal”

3.5.1.1. Background

“Freely available, understandable and usable information is one of the significant pre-requisites of developed civic and democratic society, as well as development and implementation of a successful sust:

development policy” is pointed out in the National Environmental Policy Plan (NEPP) of Latvia. The development of the integrated environmental information system and provision of effective environmental information exchange in Latvia is identified by NEPP as one of the important goals for years 2004 - 2008.

One of the significant activity for carrying out implementation of three Rio Conventions is provision of reliable, comparably, timely, targeted, and relevant environment information to policy making agents and the public. It is important to develop the integrated environmental information system covering information sources in all ministries and institutions involved in the implementation process of Conventions to ensure sharing of relevant information. At the state level, integrated environmental assessment often requires data from different processes to be brought together. Information on the sources of this information (and the sources, which can correctly interpret this information) must be available. Therefore, there is a clear need for an Integrated Environmental Information System (ISEIS), which incorporates in one-network information systems of all ministries and institutions under different ministries. It includes that each of the incorporated information systems should have the common classification system and meet all the requirements of the *Law On State Information Systems*.

Tools of National Environment Portal (NEP) should provide access to information resources. The NEP ensures routing, selection, and dissemination of necessary environmental information located in different databases. The NEP home pages of different institutions via one access point – one *Internet* home page.

3.5.1.2. Institutional Framework

On the state level the responsibility on supervision of IT sector was taken over from the Ministry of Transport and Communications to the State Chancellery’s Information Society Bureau (ISB) from beginning of 2000. The Information Society Bureau ensures development of the state policy relating to information society and e-government, as well as coordinates the implementation of this policy.

Several boards were established in the previous years – the National Information Technology Policy Coordination Board (formed on January 15, 1997), the State Integrated Information System Coordination Board, the State Information Technologies Board. The main task of these boards was to ensure coordinated development of state level cross-ministerial information systems. At present, all boards mentioned before have finished their activities. Two new boards – the E-Government Board (includes representatives from ministries on the level of State Secretaries or Deputy State Secretaries) and the National Information System Board (includes ministers from all ministries, chaired by the Prime minister) are under development now. The objective is to coordinate development processes of the state information systems and collaboration between ministries in the information technologies sector. It is planned to develop the collaboration mechanism between these boards in order to achieve support and understanding from high-level policy makers. The Ministry of Environment (MoE) as the responsible institution on development and coordination of implementation of national environmental protection policy has crucial role in development of state environment information system.

According to mandate delegated by the MoE, the Latvian Environment Agency (LEA) started to develop a corporative environmental information system covering institutions subordinated to MoE (former – Ministry of Environment Protection and Regional Development) since 1996. In the framework of the State Investment Program’s projects and technical assistance projects local area networks (LAN) was developed. A corporative computer network was established by linking 17 institutions by means of the State-Significant Transmission Network. Corporative computer network covers institutions from both, central and rural parts of Latvia, and allows access to information resources of global computer network *Internet* (information in web pages, on-line databases etc.), as well as ensures usage of e-mail.

The LEA launched the project on development of environmental portal applying technologies suggested by the European Environment Agency (EEA) in 2001 but due to lack of finances this project was stopped. In 1997 the Information Technologies Board of the MoE was established to coordinate and to control information systems' development process in institutions subordinated to the ministry.

According to the MoE Development Strategy for the year 2005- 2007, the newly established institution – the Latvian Environment, Geological and Meteorological Agency (LEGMA) has overtaken the functions of the LEA.

According to the *Law On State Land Service* (accepted on December 15,1992.) the State Land Service of the Republic of Latvia was identified as a responsible institution on performing administration of real estate inventory (cadastre) in the whole territory of Latvia and visualization of geographical information in the territory (geodesy and cartography).

3.5.1.3. Legislative/Regulatory Framework

The legal base for the development of the ISEIS should be legal acts where the basic principles on operation of information systems are defined. At present, close to the end is development of package of legislation on state information systems registration, maintenance and information protection related with *Law On Information Systems*.

The first significant legislative act of the IT sector is the *National Information Technology Program* adopted by the Cabinet of Ministers on March 30,1999 with amendments in 2000. This Program determines the principles of Latvian information technology. It is a complex Program targeted for the time between 1999 and 2005. It includes execution of 13 sub-programs, which depend on more than 120 various projects, including project on development of environmental information system. The main goal of the *National Information Technology Program* is to ensure Latvia's integration in global processes and to create an information system. This program constitutes the development of Latvian information systems, as well as wide international cooperation for integrating data into different data exchange networks, systems and services in European corporate systems. The last report on the state of implementation of the Program was prepared by the Cabinet of Ministers in 2004 and is not accepted by Cabinet of Ministers yet. Further status of the Program and implementation of proposed activities depends on decision of Cabinet of Ministers.

In 2002, the Cabinet of Ministers adopted the *Concept of Latvia's E-Government*, which determines the strategy of implementation of e-government, stipulates the strategies, provides unified understanding among implementing institutions and the entire society, initiates decisions on launching e-government programs and mobilization of all related financial and organizing resources.

Only after joining the EU, development of national sectoral programs on information gathering and processing were launched in order to fulfil requirements of EU legislation, including public discussions and acceptance. For example, the *National Fisheries Data Gathering Program For Year 2005* was developed according to requirements of European Council regulations No.1543/2000 from June 29, 2000 and accepted by Cabinet of Ministers of Latvia on July 27, 2004. This program could serve as a good example for development of programs on environmental protection issues.

The ISB has prepared the Final version of Concept on Development of the Geographical Information System (GIS) of Latvia ("Concept of the State GIS model") (2003) and has developed project proposal for the Investment Program, which is based on this concept. Implementation of the project will allow coordinated development of the state GIS system.

Exchange of environmental information in Latvia is regulated by many legislation acts. Most important are Law On Environmental Protection, Law On Physical Persons Data Protection, Law On Access to Information, Law On State Information Systems, Law On Electronic documents, Law On State Statistics and related regulations of Cabinet of Ministers. The Cabinet of Ministers had accepted some regulations on gathering and processing of several parts of environmental information. However, as a rule, the regulations define only responsibilities of institutions and some general requirements for information gathering, processing and protection. The exception is regulations of Cabinet of Ministers No.483 On Contaminated Sites Exploration and Registration. These regulations provide more detailed information.

In the year 1997 the *Concept of IT Development Strategy of Ministry of Environmental Protection and Regional Development (MEPRD) for 1997-2002* was developed and accepted by the Ministry. The concept proposes “development of the Unified Environment Information System to provide relevant, timely, and reliable information on nature resources, state of the environment, anthropogenic loads and solutions, design of technology and social and economic development to policy-makers, general public on national and international level. At present, this concept is out-of-date and goals proposed in concept were achieved only partly.

The new Strategy for the Ministry of Environment of the Republic of Latvia 2005 - 2007 (draft version) proposes measures on improvement of environment information system as well as essential institutional reorganization. Thus, the information infrastructure and responsibilities on information resources will be reorganized essentially. The Strategy foresees development of integrated environment information system connecting institutions subordinated to the Ministry of Environment and complying national and international requirements for environmental information.

3.5.1.4. Overview of Relevant Activities/Projects

Project on development of state integrated information system (mega system) (SIIS) was launched in Latvia in 1995. Project proposed at the first phase to develop core of mega system - five essential state registers (Register of Real Estate, Register of Population etc.), and afterwards step by step to incorporate into mega system sectorial registers, incl. environment information system as an information system of the Ministry of Environment (former- the Ministry of Environmental Protection and Regional Development).

However launched processes on streamlining the information flows and development of information system in the framework of both, the *National Information Technology Program* and the *SIIS* was stopped due to lack of support from policy makers and also due to the lack of finances. Since year 1999, the financial support for SIIS project was stopped and the project is not fully implemented up to now.

The State Investment Program's project “Development of the Unified Environment Information System” was launched in 1996. The project was managed by the LEA and was the most significant project implementation of information technologies in the field of environmental protection covering all institutions subordinated to the Ministry of Environment. However, the financial support for this project was stopped in 2003.

The new EU structural funds' project “Development of the Unified Environment Information System (1)” proposal was developed by LEA in 2004. This project is included into the EU structural funds' National Program “Development of e-Government Infrastructure”. It is forecasted that this project will start in 2005.

3.5.1.5. Selected Principal Causes

Insufficient implementation of current legal acts in the field of environmental information exchange.
Some respondents stressed that already after acceptance of the *Concept of IT Development MEPRD for 1997-2002* many institutions, including even some structural units of Ministry have not complied with this C

as well as with accepted Ministry's Regulation on Information Technologies Board (ITB). These documents foresee to inform and to submit for approval in the ITB all IT projects, incl. data base development projects developed in the MEPRD and subordinated institutions. The result of the ignorance of this requirement databases in many institutions are developed incompatible, not suitable for all target groups (stakeholders used technologies are incompatible with information technologies of another information systems. Some approved common classification systems were not used and thereby cross table or cross information queries are impossible.

The reasons for the insufficient implementation of current legal acts are quite different – from lack of awareness on these issues in the involved institutions until the lack of willingness to implement requirements and the lack of appropriate control system for the implementation of these requirements.

The measures on coordination of information technologies application are oriented mainly to the institutions subordinated to Ministry of Environment and not include institutions subordinated to another ministries. Thereby environmental information systems developed in institutions outside of Ministry's system some are developed incompatible with Ministry's information systems and do not meet fully the requirements environment protection legislation, as well as reporting and decision making needs.

Weak legislation environment defining development of Integrated State Environment Information System streamlining data flows and responsibility of institutions.

Lack of appropriate legislation concerning ISEIS is closely related with the incomplete legislation environment development and maintenance of state information systems. Well-developed legislation for state information systems will help to address problems of ISEIS.

Insufficient awareness of high-level decision makers on the significance of ISEIS.

The most of respondents recognize this cause as the most essential why ISEIS (incl. development of legislation and GIS component) has not enough supported on both, institutional and state level. It is mentioned that development of information systems (especially implementation of GIS technologies) requires high investments and additionally entrustment of responsibility and therefore the decision is sidestepped. Understanding and support from high-level decision makers could allow to set up development of ISEIS as high priority task and to include it as a high priority activity in declaration of Government. Thereby necessary financial support could be found out. This cause highlighting another problem – experts have not enough time to prepare project proposals understandable for top level decision makers. The project proposals presented to the Ministry of Environment and to the Cabinet of Ministers are prepared using sophisticated language terminology. Therefore decision makers, due to limited time, do not spend enough attention for exploring understanding of these projects.

Insufficient reliability and compatibility of the environmental data.

This cause makes the usage of the data in decision-making processes impossible. Data quality should be improved for the ISEIS by establishing a regular monitoring, data flows and regular updating of the data to ensure that databases do correspond to actual situation. The more information on this cause can be found in the in-depth analysis of capacity constraint “Insufficient or inconsistent levels of funding for environmental monitoring and data collection, including a lack of state level policy and strategy for environmental monitoring”, which is performed in separate document in the framework of NCSA project.

Insufficient use of environmental information, trend analyses, modeling in the decision-making process.

The more information on this cause can be found in the in-depth analysis of capacity constraint “Insufficient or inconsistent levels of funding for environmental monitoring and data collection, including a lack of state level policy and strategy for environmental monitoring”, which is performed in separate document in the framework of NCSA project.

Low salaries in the state institutions prevent engaging high professional IT specialists, particularly in regions of Latvia.

The in-depth analysis of capacity constraint “Salaries of public employees in the environmental (including inspectors) are not sufficiently competitive with the private sector” is provided separately.

3.5.1.6. Key Barriers

Lack of freely available information system on environmental projects carried out in Latvia.

Easy accessible information on all projects related with environmental issues (including, for example, projects in transport sector) would ensure multipurpose and more effective use of results of the projects and to avoid duplication of similar projects. The MoE foresees to develop environment investment project (co-financed by EU structural funds) database in 2005. However, lack of state level information system, which includes information on projects in all other sectors, is very crucial because projects from other sectors could provide appropriate information for environmental assessment as well. In addition to that, a lot of projects on environment issues are carried out without a direct participation of Ministry of Environment (for example, environmental projects carried out by municipalities and NGOs). Similar state information systems' access system is foreseen in the *Law On State Information Systems* and related regulations of Cabinet of Ministers. Unfortunately development process of these legislative acts is not completed yet. One respondent pointed out that some of institutions attempt to avoid registration of information system according to requirements of *Law On State Information Systems* and to consider their information system as systems developed for internal needs.

Information systems' development process often does not include full system analyses according to development standards of Latvia.

Different user groups, incl. users from different ministries, are not inspected and information system is not designed to meet needs of all potential users. For example, one of the most advanced information systems in Latvia – car registry (developed by Road Traffic Safety Directorate) does not include all the information needed for calculations of the emissions into air from traffic. During vehicle technical visiting information on engine capacity and presence of catalyzer is not collected and entered into this IS. Lack of mentioned information does not allow assessing emissions from mobile sources according to methodology for National reporting proposed in the UNFCCC.

Lack of qualified personnel in the field of information management (environmental information managers) performing system analyses before launching projects on information gathering, incl. projects on development of legislation acts related with information gathering issues could be seen also as a barrier.

Sometimes environmental data and information are collected without feasibility studies on necessity and vision of the goal, without analyses on needed data formats as well as without cost effectiveness analyses. Respondents stressed that initiation of data collection are not launched according to the methodology for development and system analyses. The respondents pointed out that major part of environmental data and information are collected according to the requirements of legislative acts and requests of international organizations, such as the European Commission (EC), the European Environment Agency (EEA), the European Statistics Bureau and international conventions. Thus, analyses on goals, target groups, frequency of usage should be done before or within the development process of legislation acts. Besides that, only professional and knowledgeable “environmental information managers” can motivate necessity of information system to the high-level decision makers and ensure development and maintenance of IS.

Standards for development of state cartographical products are not defined.

This barrier includes several unsolved problems:

- *Law On Geodesy and Cartography* is not adopted. The elaboration of the law started several years ago but it does not complete yet. As pointed out most of the

respondents, this law should clarify uncertainties concerning state geodesy and cartography information systems;

- The State Land Survey can't fulfill functions on coordination and supervision of GIS development according to the *Law on State Land Service*. Lack of the legal mandate into related legal acts on realization of the functions mentioned before; contradictions in some legal acts (for example, in the *Law On Protective Zones*), as well as consideration that the State Land Survey as a executive institution has no influence on distribution of state investments for GIS development in another sectors are major barriers to effectively fulfill functions of GIS development coordination;
- Insufficient coordination of development of GIS in different sectors and insufficient definition of needs from GIS potential users (outside institutions - developers of GIS). As pointed out one respondent, needed digital maps, information and relevant GIS software are available in Latvia. Digital geographical and land information systems for different sectors were developed as well. However insufficient coordination causes duplication - development of similar digital information in different sectors and development of GIS that is not suitable for users in another institutions or sectors. Sometimes use of expensive GIS technologies without expected results discredit idea of GIS and as a result we can find institutions, which disclaim GIS at all or stop to use it.

Regular monitoring and gathering of actual information are not provided in some areas to ensure updating of databases.

The in-depth analysis of capacity constraint "Insufficient or inconsistent levels of funding for environment monitoring and data collection, including a lack of state level policy and strategy for environment monitoring" is provided separately in section 11.3.

Low salaries in the state institutions prevent engaging high professional IT specialists, particularly in regions of Latvia.

Especially it is important in case of implementation of GIS technologies due to necessity for highly qualified personnel. The GIS are very complicated technologies and implementation of them depends not only on hardware, software and reliable spatial data but as well as from staff, which can realize needs of users and assist in formulation of user requirements, assist them by demonstration restriction and power of GIS. As examples the GIS specialist training programs of the Faculty of Geography and Earth Sciences (the University of Latvia) and the Faculty of Civil Engineering (the Riga Technical University) were mentioned. Although GIS training program should be divided as a separate education program or specialty and should not be a part of another training programs due to the importance of GIS technologies among other information technologies. Almost all respondents from different ministries and state institutions pointed out lack of highly qualified and GIS personnel.

Insufficient cross-ministerial coordination mechanisms to incorporate environmental information into other sectors.

The existing IT coordination boards mentioned before and supervision boards of large information systems could play a role in such coordination. Although up to now the work of coordination boards have not been very effective and some of them have stopped functioning altogether. One respondent pointed out that current ineffective environmental data exchange between ministries is unsolved organizational problems – for example the LEA try to solve information exchange problems between institutions on expert level but does not involve top level managers of the Ministry of Environment (state secretary or minister). Another respondents pointed out that problems on information exchange and incorporation of needed information into information systems of another sectors (for example, information for reporting according UNFCCC) were discussed in

ministerial working groups with different level of participation and the Ministry of Environment and Central Statistical Bureau were informed.

3.5.2. Existing environmental information centres do not function in a coordinated and complementary fashion and there is insufficient support for establishing new ones where needed.

3.5.2.1. Background

Comprehensive and target oriented environmental information can succeed public support for environmental goals and related measures. The principle “think global, act local”, reminds that cooperation between national and local level decision makers and different public groups is indispensable, because environmental protection measures are realized at local level.

All three conventions- Rio convention *On Biological Diversity* (CBD), UN convention *On Climate Change* (UNFCCC) and UN convention *To Combat Desertification in Countries*. (UNCCD)- have specific requirements regarding public awareness on nature conservation, climate change and land degradation. Public awareness programmes and public access to information is highly supported measures, inter alia, involvement into decision-making.

The National Environmental Policy Plan (NEPP) states that wider involvement of the society is of importance for forming of civil society. The distinct actions, like, establishment of an Environmental Information and Education Centre at the Ministry of Environment (MoE) to supply the public with information of interest, to consider complaints and propositions of the public and to carry out educational involvement of public environmental organisations in the public awareness process on a wider scale and defined.

Considering all above mentioned and knowing that the Aarhus convention *On Access to Information, Participation in Decision-making and Access to Justice in Environmental Matters* is ratified in Latvia in the issues, like, public rights of access to environmental information; public participation in decision-making process and all, are claiming governmental and non-governmental organization attention more than previously.

3.5.2.2. Institutional Framework

The MoE governs development and implementation of environmental protection policy. The institutions MoE, like Latvian Environment Agency (LEA), Latvian Hydrometeorological Agency (LHMA) and Geological Survey (SHS) have important role in environmental monitoring performance, data collection, processing and dissemination of environmental assessment reports at the state level. According to mandate assign by the MoE, development of corporative environmental information system covering all institutions subordinated to MoE since 1996 was started by the LEA. The project on development of environmental information system applying technologies suggested by European Environment Agency was launched in 2001. The project stopped due to lack of funding. In fact, it was the part of attempt to develop a comprehensive environmental information system- National Environment Portal (NEP), providing access to information resources located in different databases or home pages of different institutions.

Currently the LEA provides free access to environmental information (e.g., environmental monitoring data on air and water pollution loads, waste management, use of natural resources, circulation of chemicals and substances and products, etc) via its web page and environmental assessment reports (since 1997). The access of environmental information provided by the LHMA and the SGS is more limited concerning

information that is published for free. Considering oncoming structural changes¹⁵ and limited state budget is allocated to monitoring it is anticipated that the information accessibility will be reviewed strictly to information of free access (collected for funding of state budget) and commercial information.

There are number of Environmental Information and/or Education Centres (EIC) situated in environmental institutions such as Regional Environmental Boards, Teiči and Slitere and North Vidzeme Biosphere Reserves, subordinated or supervised to the MoE. REBs are operating as the EICs at local level certain time because municipalities, entrepreneurs and other groups of society require permanent environmental expertise. Therefore establishment or development of EICs is rather regularity than focused action. In some cases EICs have no separate room with full time employee and all necessary equipment but it operates as the REB of Administration of SPNT as a part of duties of environmental inspector or employee.

The main auditory are students. Respondents mentioned collaboration with local newspaper as well. The latest trends show that local inhabitant attendance of EIC is rising because municipalities lack environmental experts. Some municipalities and public organisations have their own Information Centres that are oriented on local environmental issues and provide environmental information, like Cēsis City Council. The collaboration among municipalities and local environmental institutions differs and is characterized from successful to poor. Mainly coordination is facilitated through joint projects or activities.

Students are important key group when thinking on environmental information use and universities have an important role in rising awareness of students. E.g., the Daugavpils REB has successful collaboration with Daugavpils University. However information exchange among universities and state institutions is not sufficient. The information exchange happens mainly if scientists or scientific organizations are involved in execution of monitoring or joint projects.

3.5.2.3. Legislative/Regulatory Framework

The Law “On Environmental Protection” (1991) regulate publicity of environmental information, provide active distribution of information, as development and maintaining of public databases, registers, Internet pages, publishing of environmental assessment reports, environmental policy plans and programmes, inform the public of its rights and possibilities of receiving information and participation in decision-making.

There are other legislation that regulate information flows and public rights on access to different kind of information (int. al., environmental information), like, *Law On Physical Persons Data Protection*, *Law On State Information Systems*, *Law On Electronic documents*, *Law On State Statistics* and related regulatory acts of Cabinet of Ministers. E.g., *law On Access to Information* (1998) is one that defines order and regulates information availability to general public, disposable in administrative and municipality bodies. *Law On Information Systems* (2002) regulates demands for state information system.

The *Law On Aarhus Convention...* is in force since 26th of April 2002 and set requirements to guarantee rights of access to information, public participation in decision-making and access to justice in environmental matters. In addition, the Rio Conventions (the UNFCCC, the CBD, both ratified in 1995, and the UN Convention on Biological Diversity (2002) have various provisions in them related to environmental information calling for:

- development of educational (also school) and cognitive programmes (educational activities shall be fostered on national and regional level as well as international co-operation shall be practiced);
- involvement of the society (e.g., in decision making);

¹⁵ According to the Ministry of Environment Development Strategy (2005- 2007) the LHMA, LEA and SGS are joined in the Latvian Environment, Geological and Meteorological Agency in 2005.

- strengthening of the expert capacity of state institutions dealing with environmental information;
- participation of NGOs;
- NGO and public support for the development of national programmes.

E.g., the article 6th of the UNFCCC, devoted to education, training and public awareness, call for: ‘ awareness programmes on climate change and its effects; public access to information on climate change and its effects; public participation in addressing climate change and its effects and developing adequate response; the development and implementation of educational and public awareness programmes on climate change and its effects’.

The implementation of the above-mentioned conventions as well as EU environmental legislation succeeded directing to environmental information issues – enabling of public access on environmental information and involvement into decision-making process.

3.5.2.4. Selected Principal Causes

Environmental information availability and public involvement into decision making process was not a priority issue in recent environmental policy

Development of EIC, target oriented environmental information and related issues become more relevant and get legal force with the transposition and implementation of EU and international environmental policy therefore EICs was formed as a logical necessity concerning tasks of institutions, not according to special program.

Low public activity and participation in decision making process

The interest of environmental issues, incl. awareness of public rights to claim certain environmental quality, is rising by the certain living standard. Recent history and current economical situation in many cases have succeeded negligence on environmental issues, especially at local level, as it was emphasized by number of respondents. Interest on environmental issues is growing gradually, and main driving force is different informative activities (organized by state environmental institutions via projects or NGOs and all) like, workshops, competitions, distribution of booklets and leaflets. The statistics shows that main target group currently mainly interested in environmental information, are students.

There is no defined structure or policy to ensure public access to environmental information (funded by state allocated budget)

Different environmental information is available via home pages (the MoE, LEA, LHMA, SGS and all) or in a form of environmental assessment reports (issued mainly by LEA or within different projects). However the accessibility, amount and kind of information differs remarkably from institution to institution, because there is no regulation of what kind, what format environmental information (or data) and how often have to be provided by the means of state budget. Existing legislation regulates availability of certain data groups (e.g., data on protected species, or actual information provided in emergency situation, etc) but no requirements on state environmental information cycle (int. al., institutional responsibilities on data availability, etc.).

Responsibilities of environmental institutions are not defined properly respecting environmental information exchange and public information

Target oriented and integrated information requires data and information exchange and collaboration among institutions. If the institutional responsibilities are not clearly set, common vision and action is lacking. This issue is very linked with capacity constraint “Weak

environmental legislation defining development of Integrated State Environment Information System and streamlining data flows and responsibility of institutions” is analyzed in section 3.8.

3.5.2.5. Key Barriers

Lack of State Environmental Information System (SEIS)

The operating SEIS could considerably ease availability, compatibility and interpretation of relevant environmental information of public interest. The employee of EIC could easily get access to Meta information (information on information) and provide information. (for more detailed analysis see in-depth analysis for the capacity constraint “Lack of an official, integrated Environmental Information System including GIS component and an Internet-based environmental portal”).

Insufficient human capacity (number of experts) of local EIC (REBs, Administrations of SPNTs)

In most cases EIC have no full time employee but as additional duty of inspector or expert. E.g. specialists working in the Administrations of Specially Protected Nature Territories are too busy with their duties to give due attention to preparation of specific environmental information and public information and alike REBs. Specially trained employees are lacking.

Accessibility of the EIC is limited by working hours

In most cases local EICs have no full time employees, therefore accessibility of EIC is limited; it diminishes public interest.

Lack of stable funding; outdated equipment of local EICs

EIC are formed mainly voluntarily and within international collaboration projects providing equipment, training and all. There is no permanent state funding and maintenance costs are provided via projects, e.g., local projects supported by Latvian Environmental Fund. It limits possibility to provide modern equipment and employ full time expert. Use of Internet and thereby all on-line information is limited.

User-friendly and target oriented environmental information is not sufficient

Commonly EICs/REBs are using state environmental information (provided by LEA, LHMA as the result of implementation of the National Environmental Monitoring Programme, or environmental assessment reports and all). Current approach shows that target oriented environmental information is lacking and key institutions is not providing it. EIC have no capacity to provide such information. Monitoring data is collected and stored in different databases but the final stage- data interpretation- is not sufficient in regard to its effective use. The assessment is mainly narrow expert range oriented and too complicated for general public and target oriented environmental information is lacking. The integrated approach is somewhat lacking.

3.5.3. Insufficient or inconsistent levels of funding for environmental monitoring and data collection; a lack of state level policy and strategy for environmental monitoring

3.5.3.1. Background

Environmental monitoring is a critical tool for supporting implementation of the state policy regarding environmental protection and sustainable development as well for estimation of its effectiveness. Sustainable development is not conceivable without enforcement of the optimal environmental policy based on information obtained from effective environmental monitoring.

The implementation of three Rio conventions and implementation effectiveness assessment should be strongly based on environmental monitoring data and information.

3.5.3.2. Institutional framework

The Ministry of Environment (MoE) is responsible for developing environmental policy in Latvia, including legislation and regulations that govern environmental monitoring. The Latvian Environment Agency (LEA)¹⁶, institution subordinated to the MoE, coordinates environmental monitoring according to the National Environmental Monitoring Programme (NEMP) endorsed in 2002. Although the NEMP was developed with a goal to encompass all state environmental monitoring and coordinate cooperation among different monitoring executors subordinated not only MoE but other ministries, in reality the LEA coordinates monitoring that is not performed by other state institution with a permanent budget for this. Because in other cases the LEA cannot influence the allocation of funding but the real coordination without funding is not effective. The Ministry of Agriculture (MoA) and the Ministry of Health (MoH) allocate budget for environmental monitoring performed by institutions of their subordination. The MoA is financing for monitoring of forests (performed by State Forest Service), sectoral hydrological monitoring (both included into NEMP) and forest resources monitoring. The MoH is financing monitoring of drinking and bathing waters (included in the NEMP).

According to the legislation polluters or enterprises perform survey monitoring of pollution that is paid by polluters i.e. enterprises. Different scientific institutions are involved in monitoring process with financial assistance from different international projects or national scientific grants and many of them perform monitoring of the NEMP as well.

3.5.3.3. Legislative/Regulatory Framework

The Law On Environmental Protection (1991) lays down the main principles of Latvian environmental policy. It defines also that state provision for environmental protection is state environmental monitoring system. The Law on Pollution (15.03.2001) defines objectives to secure land from pollution, pollution prevention and control including monitoring paid by enterprises (selfmonitoring).

The CoM Regulations No. 162 Regulations “On Environmental Monitoring and Register of Polluted Sites” (08.04.2003.) set principles and requirements for performance of environmental monitoring, stipulating that environmental monitoring is organized or performed by the MoE, the MoH and the MoA; municipalities and trade institutions. Monitoring paid by polluters (enterprises) is not categorised as environmental monitoring in these regulations.

More specific monitoring requirements are set in different sectorial legal acts, e.g.:

Law on Conservation of Species and Habitats (adopted in 2000);

Law On the Specially Protected Nature Territories (adopted in 1997);

Law On Convention on Biological Diversity (adopted in 1995);

CoM Regulation No. 154 On Assessment, Prevention, Limiting and Control of Air Pollutants Emitted from Stationary Polluting Sources (adopted in 2000), etc.

¹⁶ According to the MoE Development Strategy for the year 2005- 2007, the Latvian Environment Agency, the State Geological Survey and the Latvian Hydrometeorological Agency was reorganized and the Latvian Environment, Geological and Meteorological Agency (LEGMA) established instead; all functions of these institutions now is under the LEGMA authority.

The Strategy for the Ministry of Environment of the Republic of Latvia 2005 - 2007 is the first official document, which foresees the change in the order of financing of monitoring works from the unstable project based funding to the more stable annual state budget funding. Also this document foresees the revision and prioritisation of the NEMP in 2005.

3.5.3.4. Overview of Relevant Activities/Projects

First attempt to streamline national/state environmental monitoring was made by elaboration of the NEMP, endorsed by the Minister of Environment in 2002. The target set was to avoid overlapping of environmental monitoring:

- when different institutions with restricted financial means of the state budget carry out analogous observations and to ensure monitoring in nationally or internationally important fields;
- where monitoring until now is not carried out or does not meet the requirements of the legislative acts.

In fact, it was an attempt to define environmental monitoring of national importance apart from the performing institution and donor.

The NEMP contains the following parts, holding monitoring sub-programmes fully or partially corresponding to the monitoring relevant for the implementation of three Rio conventions (see figure 1 in separate file):

- Monitoring of Air and Climate Change;
- Monitoring of Waters;
- Monitoring of Biological Diversity;
- Monitoring of Geological Processes;
- Monitoring of Terrestrial Environment and its Components.

The coordinator of the implementation and execution of the Programme is the LEA, which should ensure elaboration of annual working plan accordingly to the NEMP and allocated funds. The main part of the NEPM is performed on the basis of annual contract, contracted by LEA to different scientific, private and state institutions. The Latvian Hydrometeorological Agency, the institutions subordinated to the MoA and MoH have their own state budget for performing traditionally “their” monitoring.

Due to restricted budget allocated to monitoring, mostly already ongoing monitoring works are continued but not new ones are started as foreseen in the NEMP. Exception was in the year 2003 when financing was allocated for starting of some new monitoring sub-programmes (mainly biodiversity monitoring).

3.5.3.5. Selected Principal Causes

Weak basic normative act on environmental monitoring.

CoM Regulations No. 162 Regulations “On Environmental Monitoring and Register of Polluted Sites” (08.04.2003.) set principles and requirements for performance of environmental monitoring. The regulations are too general and even do not give basic mechanism of the implementation of national/state environmental monitoring (i.e., mandate for the implementation of the NEMP) and basic principles of inter-institutional cooperation on these issues. In fact, there is no definition or explanation of what do we mean by “national/state environmental monitoring” apart from

institutional responsibilities that is indispensable to ensure collaboration and information exchange.

Insufficient collaboration of institutions engaged in environmental monitoring.

Although development of the NEPM to some extent streamlined institutional collaboration it is still insufficient because of inconsistent legislation providing responsibilities of institutions engaged in monitoring activities (data exchange and submission, coordination).

There are many different institutions that organize and/or perform environmental monitoring and receive funding from different sources - state funding allocated to the MoE, MoA and the Ministry of Education and Sciences (funding distributed through scientific grants), international and local project funding.

Most of the institutions are not willing to streamline monitoring performance and support elaboration of national monitoring policy in a situation of restricted budget. State institutions are not confident whether the monitoring data gathered (or ordered) by other institutions are relevant to their needs, and, finally, whether these data will be available at the time and in the format needed. This makes all institutions cautious and leads to the opinion that it is more proof to order this monitoring by themselves in order to have more control of the process.

Also some scientific institutions and individuals are interested in the lack of such effective cooperation because they face short of financing and sometimes funding allocated for monitoring is like support for their being. Its sometimes leads to the situation when monitoring (or investigation) is ordered by different ministries and it is possible to get twice of funding than it would be if all monitoring works would be streamlined.

The LEA has no mandate and no legal mechanism to influence institutions subordinated even to the MoE to streamline monitoring works, it is far from institutions subordinated to other ministries.

The amount of monitoring budget depends on yearly project.

There was no permanent budget for environmental monitoring allocated to the LEA till now. The finances for monitoring were allocated on the project bases and differ from year to year. The amount of funding was known only after adoption annual project "Environmental monitoring" financed by Latvian Environmental Protection Fund, usually in the middle of spring. Ordinary contracts are made in late spring when all monitoring works already should be ongoing (and very often they are performed by "enthusiasts" who do not know the amount of budget for current year). It causes uncertainties for both, the LEA as coordinator and for monitoring executors as well¹⁷.

Insufficient awareness and support from key decision-makers

Environmental monitoring is the main instrument that shows effectiveness of environmental policy and indicates further actions. However former experience shows that monitoring and environmental policy was not interlinked enough and feedback from monitoring results was weak. It was performed more to maintain data rows (that also is crucial for estimation of long term alterations, e.g. climate changes) than provide target oriented information. This leads to the opinion of many decision makers that environmental monitoring is more scientific action than part of policy making. In addition, all monitoring procedures require deep scientific knowledge and understanding of environment in most cases. For the obtainment of thorough and valid

¹⁷ Since 2005 all functions of the LEA is overtaken by Latvian Environment, Geological and Meteorological Agency

environmental assessment usually long term and expensive observations has to be performed, in addition, different supporting information and sometimes-pilot investigations are needed.

One respondent found, that the LEA is not doing enough to prepare and succeed decision-makers oriented environmental assessment. But it is worth to mention, that visual and easy understandable information commonly requires expensive equipment and software. Without sound justification and feedback, decision-makers find the monitoring too expensive and profitless and only monitoring mandatory demanded by the EU legislation requirements is supported. Some important principles, as continuity, supporting information, quality control requirements and all are dismissed.

3.5.3.6. Key Barriers

Inconsistent legislative framework stipulating monitoring responsibilities.

Environmental monitoring requirements, incorporated into legal acts, are too general and do not define national environmental monitoring strategy and institutional framework. There is no legally approved implementation mechanism to secure transparent and coordinated implementation of the NEMP (although development of such mechanism was initiated by the LEA with development of Monitoring Council, which was operating only for one year due to the lack of appropriate mandate). All this is linked with data and information management. See also in-depth analysis of capacity constraint Lack of an official, integrated Environmental Information System including GIS component and an Internet- based environmental portal.

Lack of decision-makers oriented environmental assessment based on monitoring results.

Monitoring is very costly measure therefore strong judgement to prove its significance is needed. In fact, data interpretation and preparation of environmental state assessment is one of the final stages in monitoring cycle. Admittedly, visual and target oriented monitoring information commonly requires high experienced experts and advanced techniques, therefore the financial issues here plays important role.

The NEMP is not based on the environmental management objectives.

Environmental monitoring should be based on specific management goals set to for environmental protection according to principle of sustainability, not vice versa. It could ease justification for need of monitoring, especially for justification of funding for monitoring. The NEMP was elaborated at the time when transposition of the EU legislation was at beginning or at middle stage for most of the environmental legislation stipulating requirements of management (and subsequently – of monitoring). E.g., the UNCCD was not ratified at that time. Monitoring requirements mostly were not clear and/or explicit enough in a case of conventions, especially for the monitoring of biological diversity, allowing experts to make their interpretation of monitoring needs. The requirements of monitoring (networks, observation programmes etc.) were set mainly based on the existing observation programmes and legislation in force. Expert judgement was used to provide necessary basic observations for the implementation of forthcoming legislation.

The recent approach demands monitoring that is based on accepted environmental management goals (e.g., specific environmental management goals will be defined in the River Basin Management Plans for the implementation of Water Framework Directive (2000/60/EC) or in the Nature Conservation Plans (NCP) defined for management of Specially Protected Nature Territories). It challenged situation that monitoring sub-programmes were developed rather for the

assessment of current environmental quality than assessment of compliance with defined management goals because they were no defined.

Considering all, it may agree that existing monitoring is not comprehensive enough (especially for the implementation of three Rio conventions) and revision after environmental management goals will be set will be needed. However the great effort was made to streamline environmental monitoring at state level in a situation when monitoring policy was and still is inconsistent.

Lack of State Environmental Information System (SEIS)

Although formally the newly established institution- Latvian Environment, Geological and Meteorological Agency is responsible for the environmental monitoring, there are another monitoring data (i.e. supporting data or data that are gathered by other institutions subordinated to another ministries) that is of great importance to assess state of environment. It has to be admitted that coordination among key ministries and agencies is not strong enough to ensure data compatibility and exchange therefore development of SEIS is needed.

For more detailed analysis see in-depth analysis of capacity constraint Lack of an official, integrated Environmental Information System including GIS component and an Internet- based environmental portal.

3.5.4. Lack of scientific research related to the three Rio conventions, including ministerial procurements, approvals, and cooperation

3.5.4.1. Background

Although Latvian scientists are highly experienced and knowledgeable on different topics covered by three Rio conventions (especially the UNCBD and the UNCCD), especially soil issues are not priority research themes in Latvia that leads to very limited financial grants from state budget. Also it should be taken into account the fact that research in general is very poorly supported by the state budget in Latvia.

Applied science is insufficiently developed due to limited funding of the research activities. State funding amounted to 0.2% of GDP in 2001, which is more than three times lower than the average EU level. Private funding to the science and technology is limited: 0.16% of the GDP in 2000 as opposed to 1.2% average in the EU.

The granting procedure for different scientific projects is outdated, mainly concentrated on the historical traditions, not on the current sectorial needs. In Latvia, there is no coordinated state procurement system for applied research.

3.5.4.2. Institutional framework

According to the *Law On Scientific Activities* the structural organization of administration of Latvian research consists of the Ministry of Education and Science, the Latvian Council of Science and its expert commissions, the Latvian Academy of Science (the LAS) and different research institutions (mostly different institutes subordinated to the universities or to the Ministry of Education and Science). Currently, according with the requirements set in the Commercial Law and other legislative acts, most of the institutes change their legal status to the state agencies or to the state Ltd. In both cases, they remain the state institutions, but they will be more independent

and their success will depend very much on the ability of their managers to adjust to new situation because managers of the institutions will have more power than before.

The Cabinet of Ministers (CoM) makes decision on the state science and research policy. The Ministry of Education and Science is the central executive body responsible for the development and realization of state policy in the area of science and research. The Ministry manages the budget allocated to the education and science.

The Latvian Council of Science is collegial body of researchers and consists of representatives' form the Ministry of Education and Sciences, the LAS, the Council of Rectors, the Latvian Academy of Forestry Sciences, the Latvian Association of Scientists, and the expert commission in 14 research fields. Regarding research programs, the Council makes proposals for the development of science and research priority areas and organizes the evaluation and funding of theoretical and applied research projects. About 52% of the state science budget (governmental funds) is allocated by the grants for theoretical and applied research on project-to-project basis. Council administers grants given to winners of the national project proposal competition.

The Ministry of Environment is responsible for implementation of all three Rio conventions. The Ministry and its subordinated institutions involve Latvian scientists in the different activities quite often, especially in the field of the CBD (development of National Reports, implementation of different projects, development of national positions to the European Commission). These activities are the starting position for development of state procurement for applied research in order to implement three Rio conventions.

The Ministry of Environment supports projects of applied research to promote solutions for the priority problems of environmental protection. The Ministry of Education and Science allocate financing, but the Ministry of Environment keeps responsibility to choose actual projects. The maximum amount is up to 4000 lats per project, therefore research is limited and only small projects can be performed. Also the Environmental Protection Fund finances some small-scale research projects.

However, all previous activities are not implemented in a strategically planned, coordinated and supervised manner.

3.5.4.3. Legislative/Regulatory Framework

The key legislation act in this field is the *Law on Scientific Activity* (1992, with amendments in 1996, 1998, and 2001). This law regulates the administrative, financial and institutional features in the area of research and development and determines the competence of the Ministry of Education and Science, the Latvian Council of Science and other bodies. It describes the research and development financing priorities through the state budget and determines the rights and duties of organizations and individual (legal and physical entities) engaged in research. Other important legislation acts are several regulations of Cabinet of Ministers – *On State Ordered Research Projects; On State Research Programs, On the Latvian Council of Sciences* etc.

The vision for the future development of R&D is defined in the *Guidelines for Developing Higher Education, Science and Technology (for year 2002-2010)*, approved with the regulation No 125 of the Ministry of Education and Science, March 12, 2002. One of the tasks set up in the document is to increase the role of science in higher education establishments and especially in universities by restructuring the research system.

In order to improve the current situation with the lack of young personnel in the research, the *Program for Renewal of Academic and Research Staff* has been drafted. The activities under this program aims at attracting young and active specialists to work in universities and state research centers as well as raise the motivation of students to enter the doctoral studies or pursue post-doctoral research especially in sciences and engineering.

3.5.4.4. Selected Principal Causes

Lack of funding for applied research.

As described above, the state funding for science is crucially low. This leads to the unwillingness of line ministries, including the Ministry of Environment; to prepare state procurement programs for necessary applied science projects in their sectors, which are written only formally without real financial background to implement them.

Inappropriate understanding of significance of applied research in the implementation of three Rio conventions.

Usually all involved state institutions, as “luxury good” understands research activities foreseen in the conventions, which is not the most acute need in the restricted budget circumstances.

Inadequate number of officials and lack of their expertise in the line Ministries to formulate state procurement for the applied research needed for conventions.

The NFP of the three Rio conventions are overloaded and, as described above, they have no time to address what are considered “lower significance” problems. Another point is the expertise of the officials in the line ministries, including the Ministry of Environment, to develop such state procurement for applied science. To carry out this task they need very deep experts’ knowledge and even scientific background. Of course, it is possible to attract scientists who will help to formulate the state procurement but in the country of such size like Latvia usually there are one or two scientists in the particular field and their involvement is very risky because they could formulate the procurement not from the state perspective but from the perspective of their future employment.

Lack of confidence to national researchers’ competence.

Sometimes officials in the state administration institutions distrust to Latvian scientists in terms both, the qualification and objectivity of scientists and the technical means. For example, in the biodiversity field, there are not many scientists, which can develop ecologically grounded management proposals for protected species or biotopes. As stated in the CBD Thematic Profile, specialists have indicated that people who carry out inventories of kinds not always are well aware of ecological issues of biotope or ecosystem functioning and recognizing this problem they avoid submitting of precise maintenance proposals or give overstatements which actually result in complete prohibition for any economical activity.

Lack of an effective interministerial coordination mechanism regarding applied science.

Different scientific projects, which are commissioned by different ministries and agencies, including environmental monitoring coordinated by the Latvian Environment Agency and scientific grants commissioned by the Council of Sciences, are not coordinated at all. There is not possible to exclude the cases when for the same research project the scientific institutions receive the funding from different institutions (calling the same investigation in different titles for different institutions).

3.5.4.5. Key Barriers

Unwillingness of scientists to share their data gathered in different projects (even co-financed by state budget) with state institutions.

Scientists often do not want to provide the data gathered in the scope of different projects to the information management institutions. They do not want that their data are entered in the common databases. It can be explicable with two main reasons – (1) scientists afraid from the unfair use of their data (plagiarism), which is still possible in Latvia; (2) scientists see the possibility to sell their data (and the interpretation of these data) to different institutions subordinated to different ministries. If the data would be free available, nobody would pay for them time after time.

The lack of state funding for theoretical (fundamental) research.

The situation is unsatisfactory regarding allocation of state budget for theoretical and also applied research for scientific institutions. In fact, financing is used to provide study process, but not research. There is no permanent state budget for theoretical research at all. This is the obstacle that hinders research and development to promote sustainable land management, including soil monitoring, studies of degraded areas and their rehabilitation nature sciences, and other topics. Quite significant research is done mostly with international support and within collaboration projects.

Grant administration system is not transparent enough.

The Latvian Council of Science, basing on the conclusions of the expert commissions, is evaluating project proposals submitted for grants. Evaluation is based on the following criteria:

- Scientific quality and feasibility;
- Qualifications indicated by publications;
- Patents, etc.

As the Council is a collegial body of researchers, the allocation of grants is unable to be transparent. In the situation when state procurement (priorities) for applied research is not defined, grants are allocated for most qualified and successful scientists complying with above-mentioned criteria but not for the research needed to support practical challenges for different sectors.

Outdated research infrastructure (the facilities, equipment, etc.).

Although some resources (more than 18 millions euros) are foreseen for improvement of research infrastructure from EU structural funds in the programming period 2004 – 2006, it will not fully solve this barrier.

The lack of co-financing to apply for EU funds.

Although this barrier was identified in the regional seminars held in the NCSA project, recently this barrier is solved at least for structural funds' projects. In the cases when project applicants (state research institutions) will not have the mandatory co-financing from their own budget, the necessary national co-financing will be provided from the budget of Ministry of Education and Sciences.

The lack of young researchers.

Insufficient funding for the research activities and lack of the necessary infrastructure result in outflow of the most qualified specialists, especially younger ones from the country or to the private sector that is not related to research activities. Latvia does not attract specialists from other countries. Thus, an ageing tendency is observed – average scientist age is growing steadily and now exceeds 56 years. 3% of the Latvian scientists are younger than 36.

3.6. Environmental Education

3.6.1. Background

Effective environmental protection and management is largely dependent on educating of both the specialists and general public. The prerequisite for development of educational system is successful operation on each level (pre-school, secondary school, university, professional and life-long education), as well as level of higher education that ensures deepening and practical application of knowledge, contributing to formation of applied and other varieties of environmental knowledge. It must be noted that Latvia has laid down some environmental education foundation. A lot has been done to provide environmental studies intended for youth population. The University of Latvia, Riga Technical University, Rēzekne Higher Educational Institution, Daugavpils University and Latvia University of Agriculture – all offer study programs on environment and branch sciences. This clearly indicates the wide spreading of environmental sciences as a study subject and the role it has in restructuring of educational and environmental management systems. Textbooks and teaching aids in branch sciences are compiled and published. At the same time the contents of the education at present, as well as correspondence of these contents to practical aims of the environmental protection and management do not equal to demand labor market and public needs. The system for higher professional environmental education has not been established. Environmental education system is vaguely related to priorities arising from necessity to implement UN Conventions.

Despite the fact that the Latvian environmental protection system operates efficiently and environmental education develops well, EU integration contributes to increase of work load necessary to ensure compliance with EU requirements, for instance in water management, waste management, recovery of environment, environmental management sector. Specialists of appropriate training are needed for the job. The same concerns economic growth of Latvia. The present educational system should integrate approaches towards sustainability so as to ensure sustainable development of Latvia. New tasks arise from globalization of environmental protection issues and necessity for Latvia to get involved in formation of education system for sustainable development. Thus the project goals are clearer – firstly it is necessary to build institutional capacity – to ensure both smoother integration into EU, and strengthening of national environmental protection system.

On the other hand, environmental protection measures reach aim only if society is made aware of them and such measures are integrated in pivotal activities and management spheres. In order to achieve set goals, education supporting sustainable development should be integrated in all levels of educational system, especially higher education programs.

3.6.2. Institutional/Legislative Framework

Environmental education in Latvia is developing in all levels due to internationally established priorities and on the basis of existing tradition and experience in the field of education. Nowadays, the educational system is undergoing significant transformation in all its levels, including also the post-graduate studies. Environmental education elements are incorporated in pre-school education, conducting classes both inside and outside the premises. Environmental education programs for children are very successfully implemented. Primary education includes *Environmental Lesson*; however Primary education does not include any broader subjects of environmental education. Knowledge and attitude towards environment is shaped through subjects like Biology, Geography, Chemistry and Physics, and environmental protection issues often overlap and repeat. Secondary school offers wider range of specific subjects of environmental education, as well as optional

subjects, yet these possibilities can be considered insufficient. The same applies to professional technical education, yet there are possibilities to obtain professional education on technologies related to environment, e.g. forestry, fishing, etc.

Almost all educational establishments of Latvia offer Environmental Sciences. Various units of higher educational establishments and research institutions have developed courses of lectures on different environmental subjects. Various environmental study courses, as well as bachelor's and master's study programs are offered at University of Latvia, Riga Technical University, and University of Agriculture of Latvia, Daugavpils Pedagogic University, Rēzekne Higher Educational Institution and Liepāja Pedagogical Academy. Range of subjects provides for multitude of directions and specializations of environmental education courses and approaches, yet the main emphasis is put on nature sciences. Various environmental courses offered by the Latvian universities ensure education of various specialists in relation to problematic environmental issues, and might as well serve as the basis for more comprehensive interdisciplinary environmental study programs. Still the majority of these courses are incomplete and lack significant content.

Latvian universities offer bachelor's, professional and master's study programs in environmental science, environmental activities and engineering, environmental management. Environmental subjects taught at Latvian universities cover a wide range of problems that generally correspond to defined environmental science sectors. Each of the Latvian universities has its own approach in education of specialists. Analysis of environmental science, environmental engineering and management programs has allows drawing out 4 methods of elaborating the said programs:

- Comprehensive study programs of environmental subjects. Programs include comprehensive and specific subjects of environmental sector, i.e. horizontal and line levels. Such programs include all branches of environmental sciences mentioned above. This approach is supported by UL Geography and Earth Sciences Faculty (UL GESF) in education of environmental specialists who will have comprehensive knowledge of environmental problems, as well as by UL Environmental Science and Management Institute (providing education in environmental management and pedagogy).
- Study programs that contain environmental engineering and technology subjects. Programs predominantly concentrate on engineering and technical subjects and environmental issues constitute rather small share of up to 15-20%. Programs accentuate environmental subjects related to environmental engineering and technology; however lack horizontal environmental subjects (environmental policy, legislation, etc.). The approach is applied by RTU and UAL.
- Programs that contain individual environmental subjects. Programs contain various environmental subjects that provide general environmental knowledge in accordance with specialty chosen by the listener.
- Consolidated environmental study programs. Programs contain some of horizontal and line environmental subjects. Such programs are offered by Rēzekne Higher Educational Establishment (RHEI) and Daugavpils Pedagogical University (DPU).

An initial assessment of state financed environmental study programs of Latvian universities, the size of programs, and share of environmental subjects strongly suggests that graduates of such programs will have *insufficient* general knowledge of environmental problems. That concerns mainly study programs that include environmental subjects related to environmental engineering and technology.

3.6.3. Insufficient and ineffective environmental education and information campaigns for promotion of green principles in Latvia

3.6.3.1. Selected Principal Causes

Lack of environmental education system in Latvia

Existing environmental education system has evolved over the course of history, not as organized and systematic activity. Training and educational program contents overlap and already scarce resource are irrationally utilized. Lack of environmental education system is the main obstacle to successful tackling of present education problems and promotion of sustainable education development. A very significant constraint characteristic to education sector is insufficient information about technological environmental solutions and use/introduction of green principles.

Lack of accurate and technically sufficient environmental information in Latvia

Another important obstacle that hinders environmental education of the society is lack of information about the best and state-of-the-art, systemic solutions. Lack of information and structure prevent municipalities to opt for the best solutions to ensure optimum investments into environment. We can mention the lack of the following information that also slows down the development of environmental education:

- updated information on quality of environment and any changes;
- analysis of environmental information about characteristics of long-term changes to environment;
- information on integrated environmental quality researches, for example consumer-friendly information about the quality of Latvia's surface waters, pollution problems, information about Latvia's soil pollution;
- consumer-friendly information about food product quality, air quality, pollution caused by human activities. The main problem is that information about problems and their solutions in Latvia is not sufficiently available to the general public.

Insufficient cooperation between local governments and public organizations

Instruments and structures that enjoy public trust play important role in environmental education and informing of general public. It must be noted that frequently governmental institutions are among those structures that do not have public trust. Public and non-governmental organizations are often considered more credible, yet the low level of cooperation may be considered the main obstacle causing insufficient and inefficient environmental education level and information campaigns that are aimed at promoting green principles in Latvian society. A good example of benefit from involvement of public organizations is the problem with burning of last year's grass – unsuccessfully combated by state institutions over the years.

Insignificant role of NGOs in society

Aforementioned problems are largely caused by comparatively small role of NGOs in society. Environmental education level and information campaigns that are aimed at promoting green principles in Latvian society are largely dependent of society-generated activities that have to be undertaken according to bottom-top principle. On the other hand, the sustainable development requires the involvement of society and indicates pronounced significance of public involvement. Green principles cover all areas of public activities and the efficiency of their implementation is dependent on public involvement in state administration process. The small role of NGOs in modern society is the main obstacle to progress in this field in Latvia.

Insufficient involvement of NGOs in public information campaigns

Considering the relatively small role in the society, activities of NGOs are directed to reach social and political aims or get involved in solving environmental problems. Public information campaigns usually require substantial resources often not available to NGOs. However, in cases when NGOs have participated in various public information campaigns their work has been successful, e.g. informing about the impact of planned wood-pulp mill, as well as several environment education activities.

3.6.3.2. Key Barriers

Lack of best practices developed on a local level

Efficiency of environmental education and information campaigns that are aimed at promoting green principles in Latvian society depends on the choice of examples for analysis. Thus, in order to promote *green thinking and green technologies*, it is vital to popularize approaches elaborated on local level. The current situation indicates that the number of successful solutions is small and innovations are developing very slowly on national level, on the other hand, successful practices are weakly popularized. Such situation is the responsibility of Ministry of Education and Sciences, as well as municipalities.

Methodology for training and environmental information is incomplete

Efficiency of environmental education and information campaigns that are aimed at promoting green principles in Latvian society depends on the way it is delivered – understanding of society's needs and interests. Currently there is no environmental education and information campaign methodology, especially methodology involving modern IT solutions. The responsibility for such situation falls largely on behalf of Ministry of Environment and Ministry of Education and Sciences.

Insufficient technical and material resources for efficient public environmental education and information campaigns

Lack of resources does not provide for illustrative and detailed information on environmentally-friendly technical solutions, advantages of sorting the waste, and public information campaigns usually require written materials. Methods of information distribution and public involvement are also out of date. Ministry of Environment in cooperation with municipalities and NGOs are responsible for increase of efficiency of public information campaigns and environmental education.

Local action plan measures do not correspond to budget

Often information and education activities are planned carelessly, vaguely and disregarding the available resources which in majority of cases is limited.

Insufficient awareness of society about environmental and sustainable development problems

Level of general environmental education in Latvia is low; there is a lack of awareness of importance of innovative processes and their link with sustainable development criteria on local level often hinders information and education work. Number and often the qualification of environmental specialists in municipalities are low. This issue should be addressed to municipalities and the ME.

Insufficient cooperation and coordination of activities between environmental and health care institutions

Emphasizing of health care issues or even their bringing to the forefront may be vital for promotion of support to *green thinking*. Latvian institutions are dealing with these issues in an uncoordinated way and often there is almost no cooperation between institutions at all.

Society and municipalities are interested in intensive activities

Environmental education and information campaigns that are aimed at promoting green principles in Latvian society are often hindered by consumer-orientation of the society. Because of the low income level and wide-spread corruption, municipalities are often supporting solutions entailing extensive, resource-consuming, environment degradation-promoting developments, for instance building in sand-dune zone and similar activities.

3.6.4. Lack of textbooks and teaching aids on Latvia's environment that would also incorporate the requirements of global environmental initiatives

3.6.4.1. Selected Principal Causes

Funding of Educational System

The amount of financing available for operation of educational system is insufficient to promote system's development: create new teaching aids, promote development of new teaching methods. Low remuneration does not motivate young people to get involved, does not allow attracting the best field specialists and launching of new projects.

Lack of cooperation between state institutions responsible for environment and education

Lack of cooperation between institutions (Ministry of Environment and Ministry of Health Care) responsible for environment and education hinders the use of financial, human (experts and professionals), definition of main problems, use of current resources to tackle problems, as well as creates infidelity and doubt.

Insufficient researches to serve as the basis for development of teaching aids

Development of up-to-date teaching aids on environment is lacking link with local situation and problems. Situation and problems may be defined by locally (nationally) conducted researches. Insignificant researching amounts of Latvia hinder investigation of Latvia's environment and identification of environmental quality problems. It must be noted that environmental protection institutions also support only applied sciences that provide immediate results.

Insufficient understanding of the significance of global environmental initiatives

Understanding of common environment is the basis for environmental education. Environmental problems become much clearer when examined not only in local, but also global context. However, the general trend in Latvia is to withdraw from participation in analysis and solving of global problems. Latvia does not participate in projects for improvement of quality of environment in third countries, e.g. improvement of water supply systems, protection of biodiversity and fight against pollution.

Insufficient use of modern IT technologies in development of teaching aids

Modern teaching aids are often based on use of ground-breaking methods, for example interactive methods, e-books. This approach is rarely used in environmental education in Latvia.

3.6.4.2. Key Barriers

Market for teaching materials is limited

Development of teaching aids is often an expensive process which is motivated by forecasted profit. Latvian market of teaching materials is limited (small) and requires external financing to develop teaching aids.

Insufficient funding for elaboration of quality teaching aids

Insufficient funding hinders involvement of more competent specialists and development of quality teaching aids.

Laboratories and equipment are below desired quality

The quality of laboratory equipment hinders research work which is necessary to provide the basis of local researches. Both secondary and higher education can be considered useless if provided without sufficient laboratory basis. Use of laboratories in teaching process is vital to ensure environmental awareness.

Lack of human resources

Number of highly qualified specialists working in the field of nature and environment researches in Latvia is tiny. This is also proven by very few environmental education textbooks developed in Latvia over the past years.

3.6.5. Lack of National Environmental Education Strategy that would include best practices

3.6.5.1. Selected Principal Causes

Lack of strategic planning and development planning in Latvia

National Development Plan (Framework Document - FD) includes Latvia's priorities for 2004 – 2006, and it is aimed at acquiring EU funds. Therefore the Plan does include environmental and education issues. Unfortunately Educational classification of Latvia does not include environmental studies in Nature science group, thus funds available to modernization of Nature science programs are not available for modernization of environmental study programs. National Environmental Policy Plan for 2004 – 2008 has defined the major problems in environmental education and environmental policy. Up to this moment Latvia does not have common guidelines for elaboration of development documents and action plans. The elaboration of the common National Development Strategy that would comply with sustainable development principles is in its beginnings.

Insufficient public awareness on environmental protection, education, sustainable development and their importance

This problem exists in all levels (systematic, institutional and individual). What concerns the systematic level – environmental science is a new branch in Latvia and institutions are not aware of the role this branch of science plays. Individual's role is also unclear, there is no civic society. Majority of Latvia's population perceives environmental protection only as activity of *environmental organizations*, and we can definitely assert that Latvian society lacks understanding of environmental protection and sustainable development significance.

Lack of Higher Education Strategy in Latvia

Higher Education Strategy has not been developed. Latvia has elaborated Higher Education, Science and Technology Guidelines for 2002 – 2010; Educational Development Concept for 2002 – 2005; National Concept for Development of Higher Education and Universities for period until 2010; however, these strategic plans do not include action plan, they are not linked to financial plans. Moreover, these documents insufficiently cover environment science and education.

3.6.5.2. Selected Principal Causes

Incomplete education classification system

2004 Education classification of the Republic of Latvia rates environmental protection program (environment science, management, etc.) not as nature science or wildlife science, but as service group. Such classification of the environment science does not promote equal development and prestige of the branch. The status of the branch differs from international practice, whereby environment sciences are usually a special discipline and is attributed to natural (Earth) sciences.

Indefinite position of environmental education in Latvia's educational structure

Environment sciences and education have rather short history in Latvia despite the fact that these disciplines integrate nature sciences (geography, biology, chemistry, physics, etc.), aspects of social sciences, i.e. environmental sciences are interdisciplinary. These are the main obstacles for integration of environmental education in the overall education structure of Latvia (see previous *Barrier*).

Insufficient cooperation between institutions responsible for environmental protection, social and economic development and education

Development planning and education planning in Latvia is clearly sectoral and does not define the interests of social partners. Public procurement for education sector follows USSR traditions; there is no legislation, institutional mechanisms that would ensure harmonization of all institutional interests.

There is no agreement between stakeholders (Ministry of Environment, Ministry of Finance, State Chancellery and other state institutions) on type and level of action plans

Latvia does not have a mechanism for planning of strategic actions. The cause of that is lack of understanding the necessity for development planning, as well as nature of political processes.

Weak cooperation between stakeholders involved in education process and their social partners

According to survey of experts there is weak current cooperation between educational establishments and potential employers. Employers are often unsatisfied with the professional qualification of graduates. Educational establishments are complaining about lack of internship places, business support to so-called *field games* that allow students to get acquainted with actual situation in the particular branch, as well as unwillingness of experts working in state institutions and private companies to become supervisors of student research papers (bachelor's and master's level).

Low interest of stakeholders involved in development of environmental education strategy

Lack of environmental education strategy is largely caused by lack of motivation – there are no financial stimuli (perks), problems with qualification of civil servants involved in elaboration of the strategy (ability to have a long-term vision).

Lack of information about the best practices

There is no common opinion on goals that need to be reached by environmental education – what we want to achieve? There are regional discrepancies (e.g. Nordic experience vs. experience of Southern regions, European experience vs. America). There is no commonly approved definition of the term *best practice*. Information necessary for evaluation of experience of other countries is insufficient.

3.6.6. Insufficient support and planning in relation to environmental education programs, including insufficient planning regarding the number of specialists necessary in particular environmental science disciplines

3.6.6.1. Selected Principal Causes

Lack of Higher Education planning in Latvia

Currently there is no legislation regarding Higher Education in Latvia, except *Higher Education, Science and Technology Development Guidelines for 2002 – 2010* elaborated by Council of Higher Education. Thus higher education activities, especially in environmental education, remain uncoordinated. Necessary education disciplines are not being defined, number of necessary specialists is not being planned.

Lack of interest in promoting environmental education by specialists working in environmental protection

Environmental protection specialists often lack appropriate qualification. If specialists of highest qualification are delayed from entering the labor market, healthy competition is hindered and development of environmental education becomes quenched, as well.

Lack of efficient national development planning in Latvia

Latvia does not have common planning documents or principles. Current framework document outlines Latvia's development for next two years. At the same time there are around 150 sectoral development strategies and concepts. It must be noted that there is no link between the framework document and sectoral development sections. None of the existing planning documents has long-term development perspective.

Limited resources for the development of education in Latvia

Funding that is available for provision of education in Latvia is insufficient to provide quality education. There is lack of financing for wages, maintenance and repair of premises, purchase of teaching aids, replacement of laboratory equipment and computers.

Insufficient cooperation between MoE, ME and universities

There are neither institutional tools, nor motivation for intensive cooperation in development of environmental education.

Lack of adequate time and attention paid to planning activities

Transfer from previous (Soviet-time) planning experience to conditions of market economy has made planning processes significantly slower.

Lack of homogenous education system

There are around 40 state and private universities in Latvian with limited amounts of resources. Wide-spread overlapping of functions, tasks and responsibilities causes irrational utilization of available resources. Both state and private universities have the same financing problems.

Low interest of stakeholders (decision-makers and civil servants) in planning of educational processes

Insufficient financing, unstable political and economic environment, lack of long-term development plans puts the possibility of creating functioning environmental education planning system in doubt.

Lack of understanding of planning importance among employees working in higher education system

Universities do not offer courses on education planning and USSR experience is no longer applicable in today's circumstances.

Rapid changes of transition-period labor market requirements

Latvia's labor market undergoes constant fluctuations and causes great problems to university students. If higher demand for particular specialists occurs, the number of students in particular study programs of universities increases, and after a certain period overproduction of these specialists occurs. However, specialties that are related to lower demand there lack students. National development plans have to be in balance with the number of students to avoid shortage or overproduction of particular specialists, which may be costly to amend. Moreover, employers are seeking for professionals who have not only the qualification, but also the working experience. However, low wages force specialists to seek other working options.

3.6.6.2. Key Barriers

Contradictions between the necessities to develop certain branches of science and education

Lack of clearly defined economic needs promotes competition and contradictions among various scientific disciplines. Ministry of Education and Science is responsible for defining of public procurement.

Limited financial and human resources to ensure education

Number of universities in Latvia has tripled over past 15 years without appropriate investments into teaching staff and infrastructure, which has caused the downfall in terms of education quality against ever-rising demands. Improvement of education quality also requires larger state financing to universities.

Inconsistent process of defining priority education and research areas

The priority education and research areas defined by Latvia, e.g. pharmacy and forestry, are based on extensive economic development principles. Education and research area prioritization process of is often voluntary and persons participating in this process are usually confronted with clash of interests.

Insufficient remuneration of employees working in environmental protection

This is an essential factor that affects employees of all sectors. Current remuneration, which is at low level, may force labor force to shift to sectors with higher salaries. This leads to loss of best employees and the overall qualification of sector's employees is therefore lower.

Weak cooperation between educational establishments and potential employers

Lack of cooperation causes subsequent lack of information, which in turn forces young and qualified specialists to seek work in other sectors. Weak cooperation between educational establishments and their social partners affects also the contents of education, because neither the current problems, nor future priorities are covered.

Lack of standards for environmental professions

Lack of standards for environmental professions hinders also development of professional study programs.

3.7. Land Policy and Territorial Planning

3.7.1. Lack of an integrated land use policy that incorporates all relevant sectors, not just agriculture and forestry

3.7.1.1. Background

National Environmental Policy Plan (2004- 2008) states, that “the main wealth of Latvia and the base of its welfare is land, which is used in a sustainable way. Developing environmentally friendly agriculture, as well as identifying alternative sources of income other than agriculture, is vital to retaining the nation’s biological diversity and preventing the degradation of the rural landscape, thus assuring sustainable use of agroenvironmental resources”. Environmental protection brings forward many goals directly or indirectly connected with sustainable land use policy, e.g. provision of a sustainable use of agricultural resources, reduction of pollution, degradation and erosion of soils, preservation of forest biodiversity and the quality of ecological functions in the regulation of climate and water conditions, provision of a rational, environmentally friendly and sustainable use of subterranean depths, exploration, recovery of polluted and potentially polluted sites and all. The implementation of environmental policy and reach of environmental protection goals is not effective without operating common state land policy.

3.7.1.2. Institutional framework

The institutions key to this capacity constraint is the Ministry of Justice (MJ) and State Land Service (SLS), supervised by the Cabinet of Ministers (CM) and subordinated to the MJ.

The MJ according to its mandate have responsibility to develop, organize and coordinate state land policy.

The Law On State Land Service states that the Service’s competence is land as national wealth use and protection. Concrete tasks for realization of it are set in law, et. al.,

- land monitoring and control of its usage;
- implementation of land reform and land privatisation;
- development and maintenance of land and real estate cadastre and real estate (land, buildings and constructions) registers;
- co-ordination and management of the development of land cadastre and geographical information system and provision of state institutions, legal and natural personas with this information, etc.

According to this, STS is institution that has particular responsibility for the implementation of land use policy at the national level. However the law, existing legislation and institutional subordination does not cover all legal and practical provisions to comply with it. Furthermore, the Service is an executive body that is subordinate to the MJ therefore “policy making” (as decision-making and budget allocation) is not its mandate. The Ministry of Justice, of course, has a far broader scope of action and policy goals than land use. The decision to subordinate SLS to the Ministry was taken because of the significant legal aspects of land reform¹⁸ (e.g., restoration of ownership) started at 1991. The SLS competence of land use and protection set by the above-

¹⁸ land privatisation for restoration and of tenure after regaining of Latvia’s independence; the process is still continuing

mentioned law in reality become apparent as practical work performing administration of real estate, inventory (cadastre) in the whole territory and visualisation of geographical information of the territory (geodesy and cartography) by cadastral surveying, arrangement and management of state geodetic network, performing of topographical surveying and mapping and all.

Land use and protection is interlinked with spatial development (int.al., territorial planning) process governed by the Ministry of Regional Development and Local Governments (MRDLG)¹⁹ since 2003. Theoretically land supervision and land use control assigned to SLS can overlap with one carried out within territorial planning system, but in reality mainly technical work for land use data compilation and provision of cartographical material has been done in STS, relevant for the support of register and estimation of real estate tax.

Different ministries keeps their responsibility for sectoral policy interlinked with land use and management. Some of them are enumerated below:

- Specially Protected Nature Territory (SPNT) management is Nature Protection Board's and Administrations' of SPNT subordinated to the Ministry of Environment (ME) responsibility. The administrations of SPNT are responsible for development of Nature Protection Plans (NPP) where territory management and land use goals is defined;
- Ministry of Agriculture (MA) and its subordinated institutions is responsible for implementation of state policy for agricultural and forestry sector, int. al. forest and agricultural land management and development targets. The responsibility of State Forest Survey is survey of implementation of forest management and exploitation policy;
- According to Law On Local Municipalities and all, local governments are responsible for determination of land utilisation and procedures for its development in accordance with the territorial planning of the relevant local government.

3.7.1.3. Legislative/Regulatory Framework

Since 1991 the land reform and recovery of tenure was the dominance of land policy. At the same time sectoral policy is developing bringing forward their requirements of land use (e.g., environmental protection obligation in SPNTs). However there is no single legal act that regulates land use at national level. The State Land Service's responsibilities set by the Law On State Land Service is analysed above.

Law On Land Use and Land Survey (1991) regulates land use and land use planning, int. al., defines land use objectives (such as land use for agriculture, forestry, water management, industry; for culture, educational and other no production facility building and maintenance; for streets, squares etc.). The Statute of Land of Rural Area (1991), elaborated in compliance with above-mentioned law, regulates land use requirements in connection with land use objectives. However above-mentioned documentation was elaborated in early nineties for realization of land reform and therefore some terms contradict legislation accepted lately and therefore are non-operating.

Legal requirements of land use are incorporated in range of laws and regulations that stipulate sectoral land use policy, such as, Law On Agriculture And Rural Development (2004; previously Law On Agriculture, 1996), Forest Law (2000), Law On Land Reclamation (2003), Law on

¹⁹ the Ministry was established by joining of different institutions responsible for regional development and territorial planning

Environmental Protection (1991), Law On Protected Zones (1997), Law On Specially Protected Nature Territories (1993), etc.

The Law On Specially Protected Nature Territories specifies the basic principles for a system of specially protected nature territories; procedures for the establishment of SPNTs and secure their existence; and procedures for the administration of SPNTs, for control of the condition of such territories.

Law On Protection Zones defines different kind of protection zones and their functions. E.g. Baltic Sea and Gulf of Riga protection zone is set to prevent pollution load to the sea, protect coastal landscape, to secure maintenance of forest protection functions, etc.

Land use requirements are interlinked with spatial (int. al., territorial) planning and regional development policy. Regional Development Law and Law On Territorial Planning are accepted in 2002. Regional development in Latvia is realized in line with spatial planning documents (e.g., National Spatial Plan, National Development Plan (NDP), all level territorial plans, etc.). Elaboration of territorial plans, National Spatial Plan and related documentation is in the process.

Territorial Planning in Latvia is performed at four levels- national, 5 planning region, 26 district and local level (562 local municipality, 77 City and minute planning). Elaboration of all level territorial planning is continuing for 10 years and is anticipated to accomplish in two years. The National Spatial Plan (NSP) is the set of: Latvian Spatial Development Perspective, mandatory parts of the NSP (sets national interests in demands of territory use and development for 20 year period) and guidelines for the implementation of the NSP. Based on land values, agricultural areas of national importance are defined at the state level in 2003 (according CM Regulations no.684 On National Value Agricultural Territories). The territories have to be incorporated in territorial plans. Development of other mandatory parts of NSP, such as national territories of high risk, is undertaken; elaboration of Baltic Sea and Gulf of Riga coastal zone mandatory territory is in consideration. Latvian Spatial Development Perspective is under development and submission for approval to CM is planned in 2005.

Different land use measures are set in other sectoral documentation, some of them mentioned below:

- The Rural Development Plan defines Latvian agricultural development strategic goals for the coming years (2004-2006). It was adopted in June 2004 and is one of the documents developed to set national priorities of agricultural sector for EU structural fund attraction. One of the defined goals for the forestry sector is the improvement of environmental protection in forest areas and the afforestation of lands not used and/or less suitable for agricultural purposes.
- Latvian Single Programming Document is the other document where national priorities for EU funding is set. It incorporates activities for agriculture and forestry land management as well, e.g. land improvement (liming of acid soils is required with a view to ensure a sustainable farming to secure normal growing and development of agricultural crops), afforestation of unfarmed lands – to prevent the degradation of the potential of land as a production mean and the overall rural landscape.
- Forest law regulates forest management including forestland use. The CM in year 2002 has approved Concept for Latvian Forests and linked sector development programme. The goal of the proposed document is to set forest and linked sector development goals. A detailed action programme linked with other sector development is proposed.

3.7.1.4. Selected Principal Causes

Inconsistent institutional framework and responsibilities

During last decade there have been notable changes in institutional framework happened governing land use and protection in Latvia. The SLS²⁰ was formed in 1993 to organize land reform - one of the most important issues after restoration of Latvia's independence. Although formally the MJ is responsible for land policy and the SLS is executive body having related functions, former policy of the MJ and the subordination of the SLS have not succeeded inter sectoral collaboration and development of common land policy (binding all components- land use ownership (as a result of land reform) and land value). The MJ and SLS are still focused on land reform and different kind of land related information gathering but it is only one side of common land policy.

Changes in other institutions happened as well. The Ministry of Environmental Protection and Regional Development (MEPRD) was established in 1993²¹ uniting three important dimensions- regional development and environmental protection and construction. However the opinion that both dimensions were not interlinked enough is existent. The MEPRD was reorganized in 2003, establishing The Ministry of Environment (MoE) instead and separating "regional development function". The Ministry of Regional Development and Local Governments (MRDLG) was established in 2003 by joining of different institutions responsible for regional development and territorial planning (int. al., former MEPRD functions related to regional development).

Insufficient awareness and support of high-level decision makers to bind national, sectoral and spatial planning policy

Although the issue of land use and management and spatial development is very significant and affects all sectors, more comprehension and support is still needed. As part of this trend is too strong sectoral approach, i.e. thinking that land management is only interest of particular sector, lacking integration among sectors and spatial planning.

Frequent changes of governments (cabinet).

The development of the common state land policy is long-term measure and is hindered in circumstances of frequent changes of government. According to the Government Declaration²² priorities for their action are set sometimes bringing by institutional changes and share of responsibilities. The state vision is lacking.

The MJ action to govern state land policy is insufficient

The MJ according to its mandate have responsibility to develop, organize and coordinate state land policy.

²⁰ The State Land Service²⁰ was formed in 1993 by consolidation of the Department of Land Use Planning of the Ministry of Agriculture, the Department of Geodesy and Cartography of the Ministry of Defence, number of enterprises linked with this branch and the Land use planning structure in Municipalities.

²¹ The MEPRD was the successor of the Environmental Protection Committee and by taking over construction, housing facilities and public utilities, geology and tourism functions of the eliminated Ministry of Architecture and Construction. Functions regarding municipalities were taken over from the bygone Ministry of State Reform. Since 2001 the Department of Construction of the MEPRD and the Regional Policy and Planning Board of the Ministry of Finances took responsibility for coordination of all level territorial planning

²² I.e., document- declaration that stipulates the CoM planned action.

3.7.1.5. Key Barriers

Inconsistent legislative framework

Although sectoral policies (environmental protection, agriculture, forestry, territorial planning, etc.) are set in place, in reality they are not interlinked enough because there is no developed legal act that provides basis for common state land policy. The task to form land policy is assigned to the MJ.

Insufficient inter-ministerial coordination on land issues

In 1998 the Advisory Council on common land policy was established but faced lack of action, in 2003 another attempt was made to organize State Land Policy Coordination Council but political will of the MJ was not strong enough to make it operational. Currently there is no such form of collaboration. Recent institutional changes also play important role here. Nearly all respondents feel lack of collaboration because of no willingness to cooperate and/or low awareness of this issue. Some examples are mentioned below.

Land reform was started prior to territorial planning and collaboration between key institutions (the SLS, the MEPRD) was not efficient enough. It causes situation that territorial planning is being organized when land is regained to private property or given in private administration because land reform is nearly accomplished. Significant problems are arising here, e.g., if the private ownership is regained in land in public use (parks, roads). It is too complicated to get agreement among state interests and landowners when several private owners are for particular territory of public use.

Another situation is that SPNT designation (revision of habitats and species and delineation of SPNT borders) mostly was not sufficiently coordinated with the development of TPs and was realized outside territorial planning causing dissatisfaction from municipalities.

Insufficient number of employees dealing with land policy related issues

Almost all respondents admitted that human capacity is restricted in the SLS, the MRDLG and the MoE. E.g., the employees of the SLS are dealing with tasks other than land monitoring and control of its usage²³; some experts of the MoE take part in different working groups organized by the MRDLG but there is no official with full responsibility of environmental issue integration into spatial planning and all.

State budget that is allocated to the SLS limits actions devoted to land monitoring and land use control

The limited budget of the SLS causes focusing on actions that are more urgent or profitable, like administration of real estate, development and maintenance of land and real estate cadastre and real estate (land, buildings and constructions) registers, visualisation of geographical information of the territory (geodesy and cartography) by cadastral surveying, than land monitoring and control of its usage that is function directly related to land policy. Of course, the cadastre, register and other information also is supporting land policy.

²³ Three level monitoring of soil of agricultural lands was performed since 1994 to control agrochemical quality; for more detailed analysis see the issue “Existing soil monitoring is inadequate and requires a more comprehensive and integrated approach”; land usage control- land use in compliance with land use objective.

3.7.2. Territorial plans do not adequately incorporate environmental protection obligations and requirements, including those involving the implementation of the conventions

3.7.2.1. Background

Sound and coherent territorial planning is the tool that ensures balanced and sustainable development of the country. According to the Law On Territorial Planning territorial planning in Latvia is performed at four levels- national, 5 planning region, 26 district and local level (municipalities of cities and local governments and detailed planning). All level territorial planning represents state interests on development and use and of its territory and is based on sustainability concept. This concept necessarily includes an environmental dimension. Environmental protection goals, obligations and requirements properly incorporated into all level territorial plans (TP) provide harmonization of land use economical, social and environmental protection demands, avoiding, minimizing and eliminating any policy or administrative conflicts that might exist. The national strategies, plans or programmes developed for the conservation of biological diversity (e.g., Nature Protection Plans for Specially Protected Territories), sustainable land use and reduction of climate change effects (e.g., implementation of The Strategy of Commonly Implementing Projects for 2002- 2012, provided in Kyoto protocol) will not be effective without integration in relevant cross-sectoral policies. TP serves as legal ground for decision-making on use of particular territory (int. al., land use restrictions for environmental protection).

To this end, Territorial planning policy must give support to preventing or mitigating various kinds of environmental harm, for example, by promoting less damaging agricultural or forestry practices, encouraging more environment-friendly forms of transport and energy systems, regenerating derelict urban areas and rehabilitating their environment, preventing industrial accidents, regenerating areas damaged by industrial pollution and former military activities.

3.7.2.2. Institutional framework

Territorial planning in Latvia is divided among number of state and municipal institutions. Since 2003 the Ministry of Regional Development and Local Governments²⁴ (MRDLG) is main governing institution keeping responsibility for regional development and spatial (at present more-territorial) planning policy development, implementation, methodological governance, supervision and coordination of the territorial planning process at national level.

There are 5 Planning Region Development Agencies responsible for the development of particular region TPs. At district and local level District Council and municipality, respectively, is responsible for the development of TPs. There are 77 city councils and 26 district councils and 562 local municipalities in Latvia now, but the number of local municipalities will decrease significantly during the administrative reform being in process now. Territorial planning process is continuing ten years.

Different level state institutions and enterprises cooperate to support the territorial planning process in the country (provides necessary information, provide review of TP according to their competence, etc.).

The environmental policy is the Ministry of Environment (MoE) scope. The Minister is the member of the National Regional Development Council (NRDC) and hence represents environmental interests at national and regional level territorial planning and regional development

²⁴ MRDLG was established in 2003 by joining of different institutions responsible for regional development and territorial planning. The “regional development function” was separated for this reason from the Ministry of Environmental Protection and Regional Development and the Ministry of Environment was established instead.

process. Regional Environmental Boards (REB), subordinated to the MoE, have legal mandate to demand and control inclusion of environmental obligations into TPs at district and local level. Facilitation of awareness of local governments and community about environmental issues is the challenge of the REB. State Environmental Impact Assessment Bureau subordinated to the MoE is the competent authority that supervises strategic environmental impact assessment (SEIS); int. al. takes decision if it is applicable.

Union of Local and Regional Governments in Latvia (ULRGL) established 1991, unites nearly all municipalities in the country and therefore is relevant medium in communication and collaboration with municipalities. It is the only such organization in the country and engages in municipalities' policy forming process and has the mandate to represent municipality interests in negotiations with CM.

3.7.2.3. Legislative/Regulatory Framework

In April 2002 the law On Regional Development was adopted in Latvia. The purpose of the Law is to promote and provide balanced and sustainable development of the country addressing reduction of adverse differences between different parts of the country, maintenance and development of characteristic features and potential of the natural and cultural environment of each respective area, etc. The goal is promotion and securing of state's sustainable development in all regions by supporting measures- programs with corresponding complex of enforcing projects. Regional development in Latvia is realized in line with territorial planning development documents, such as National Spatial Plan, National Development Plan (NDP), all level TPs, etc.

The Law On Territorial Planning was adopted in 2002 (former- the Law On Territorial Development Planning, 1998) regulating territorial planning at national, planning region, district and local municipality level. Promotion of state sustainable development by using effective territorial development system is the goal; the principle of sustainability is one that should be complied. Law is too general respecting environmental obligations therefore it is critical that related legislation provide strict environmental requirements.

National Spatial Plan is related to all territory of state and is elaborated in line with strategy of regional policy, National Development Plan (NDP) and national or sectoral development program. The National Spatial Plan is a set of:

- (1) Latvian spatial development perspective;
- (2) mandatory parts of the National Spatial Plan (determine national interests in demands of territory use and development planning) and
- (3) guidelines of the implementation of the National Spatial Plan.

Elaboration of documentation related to the National Spatial Plan is in process. Latvian Spatial Development Perspective is under development and submission for approval to CM is planned in 2005. CM Regulations no.515 On National Spatial Plan sets order of elaboration, public assessment, implementation and control of national spatial planning process. State interests in use and development of agricultural areas of national importance are set (according CM Regulations no.684 On National Value Agricultural Territories). These territories have to be incorporated in TP. Development of other mandatory parts of the National Spatial Plan, such as national territories of high risk is undertaken, the elaboration of Baltic Sea and Gulf of Riga coastal zone mandatory part is still in consideration.

Regional level territorial plans determine resources, development directions and restrictions of particular region. Collaboration agreements among districts and municipalities situated in

particular region are the basis for common vision of regional development. It should be noted that territorial reform that is continuing for several years is delaying territorial planning at planning regional level.

At present CM Regulations that stipulate procedure of regional and district level is under preparation (previous CM Regulations On Regulations no. 423 On Territory Planning is repealed because of incompleteness). The special CM Regulations that sets requirements for local municipality territory plans and detailed planning is accepted (04.11.2004.) instead of CM Regulations no.34 On Local Municipality Territory Planning (accepted in 13.01.2004) because of many gaps found). The new regulations incorporate stricter requirements related to environmental matters, e.g., harmonization of developed TP with the REB and the Administration of Specially Protected Nature Territory (SPNT) is now mandatory and the SEIA have to be performed.

Environmental legislation sets environmental protection requirements important and binding for territorial planning. Other significant laws governing or influencing the development and implementation of territorial plans include:

- The Law On Protection Zones adopted in 1997 stipulates the general provisions for the different kind protection of zones (int. al., protection zones for environmental and nature resources, like watercourses, Gulf of Riga and Baltic Sea protection zone, etc). Territorial plans should incorporate protection zones set by this law.
- The Law On Specially Protected Nature Territories (1993) specifies establishment, maintenance and conservation obligations of SPNTs. According to law the Nature Protection Plan (NPP) elaborated for particular SPNT is legally binding to all level TPs.
- SEIA is phased in to be in compliance with EU directive 2001/42/EC. CM Regulations no. 157 Procedures for Strategic Environmental Impact Assessment is in force and starting from 21 of June 2004 SEIA has to be accommodated to all level TPs based on decision of Environmental Impact Assessment State Bureau (EIASB). SEIA includes Environmental report- information of present state of environment, environmental impact assessment and foreseeable problems in connection with planned measures, compliance with international environmental goals and all. According to regulations it is referable after 21st of July 2004, if Environment Impact Assessment Bureau (IASB) find it applicable. It means, that this approach is applicable if existing TP is being revised, repealed and new one initiated instead, according to legislation.

Construction obligations.

Gaps and inconsistency of legislation have succeeded negligence of environmental protection, e.g., construction of protected zone of Gulf of Riga and the Baltic Sea in a case when TP was not in force. After the amendments in relevant legislation (Law On Protected Zones and Law On Construction, amendments made in 17.01.2002 and 13.03.2003., respectively) situation has changed, prohibiting construction without TP. In other territories public discussion about proposed construction is required since 31 December 2003 if TP in not in force. Considering recent changes in legislation remarkable improvements is made and is expecting if capacity issues will be addressed.

3.7.2.4. Selected Principal Causes

Poor collaboration among institutions engaged in territorial planning and environmental protection

Collaboration between the MRDLG and the MoE is found insufficient and should be strengthened especially when significant parts of legislation are elaborated or revised. By reference to respondents' situation currently changes.

Likewise collaboration between the MoE (subordinated institutions, like Nature Protection Board (NPB), REB and SPNT Administrations at local level) and municipalities needs improvements in the aspect of related environmental information availability and handling to municipality. E.g., urgent development of SPNTs (revision of habitats and species and delineation of SPNT borders) mostly was not sufficiently coordinated with the development of TPs and was realized outside it. It caused and still is causing dissatisfaction and incomprehension by municipalities. In addition, revision of the TP in force after endorsement of NPP for the designated SPNT (to be in line with nature protection demands) is local municipality responsibility. Hence raising awareness on environmental issues and collaboration is crucial.

Inconsistent legal framework to be in compliance with environmental obligations

During last decade notable changes in institutional framework have happened²⁵ causing share of responsibilities. Therefore, it is unambiguously to assign inconsistencies of existing legislation to the competence of one ministry. The analysis produced the following findings:

- legislation related to territorial planning is unfinished: according to legislation all level territorial planning is interrelated and every inferior level TP is elaborated considering higher-level TP and the relevant documentation. Actually documents related to National Spatial Plan are under development. Previous requirements were not explicit enough regarding to environmental obligations therefore new specific regulations (int. al., regulations concerning environmental obligations) for regional and district level territorial planning is being developed and are promised by the end of 2004.
- considering the status and subordination of the Building Construction Board (BCB) it is unlikely that permission of construction will be in contradiction with decision of local municipality. The BCB is institution of municipality that issues permits for construction in compliance with TP in force or after public discussion on particular construction proposal if the TP is not in force.

Low awareness of environmental issues amongst decision makers of municipalities

It is very important aspect because local municipalities take decision how to use their territory when elaborating TPs. Only large municipalities like Riga and Jurmala city, has their environmental specialists or whole environmental departments. Small municipalities have no capacity to attract environmental experts and therefore awareness of environmental issues is low apart from sustainable development concept.

Insufficient capacity of REB to ensure compliance with environmental obligations

CM Regulations No 34 and On Local Municipality Territory Planning (repealed) set harmonization of TP with the REB more in recommending form while new Regulations demands are explicit. Hence the REB keeps significant responsibility addressing this issue as well raising awareness of environmental issues at local level. Officials from different institutions pointed that

²⁵ Since 2001 the Department of Construction of the Ministry of Environmental Protection and Regional Development and the Regional Policy and Planning Board of the Ministry of Finances took responsibility for coordination of all level territorial planning. In 2003 The MEPRD was reorganized establishing The Ministry of Environment instead and separating "regional development function". The Ministry of Regional Development and Local Governments (MRDLG) was established in 2003 by joining of different institutions responsible for regional development and territorial planning.

restricted number of employees result to negligence and superficial work. One official pointed that information obtainment mechanism in REB needs some improvements to be more flexible and user friendly (target oriented).

3.7.2.5. Key Barriers

Low capacity of small sized municipalities to attract and retain staff with environmental expertise or environmental experts

Because of financial limitation small sized municipalities and local governments have no possibility to attract environmental experts when elaborating TPs. Because the development rate in local municipalities largely was slow and government did not constrain elaboration of TP, other “more urgent” actions were set instead (e.g. fixing of local schools roof and all).

Lack of guidance on environmental obligations relevant to territorial planning

Environmental protection obligations are set in different legislative documents and it is difficult to find coherence to ensure incorporation of all environmental obligations, especially at local municipality level. Respondents stated that it is important to define all environmental requirements hence facilitating observation of environmental issues; especially knowing that environmental expertise at local level is insufficient and the REB are still facing human capacity problems.

Insufficient financial incentives for municipalities to facilitate observation and incorporation of environmental protection requirements

Compensation mechanism is not enforced yet when land use is restricted because of nature protection goals (for more detailed analysis of this issue see the in depth analysis for the capacity constraint “Related compensation and incentive programs for landowners are not fully operational and / or sufficiently understood by key stakeholders” in section 9.1.). State subsidies are not long-term measure and are allocated dissimilar for different supporting measures.

Nature Protection Plans are not elaborated for all SPNT

The NPP in force is binding when TP is elaborated and thereby provide keeping of environmental obligations set into Plan. There are 632 SPNT; at the moment only 51 NPPs are approved. According to the Law On Territorial Planning TPs of municipalities should be completed by the end of year 2004 but more likely it will be prolonged. The statistics shows that 12 districts, 6 cities and 167 local municipalities have developed their TPs by October 2004. Elaborations of TPs have undertaken by 14 District Councils and 363 local municipalities, 21 municipalities is not addressed the development of TPs now. Revision of existing TP is needed if nature protection demands is not corresponding to those set in NPP. The NPB capacity (number of employees and financial resources) limits development rate of the NPP.

High-level decision makers of the MoE insufficiently govern collaboration with institutions engaged in territorial planning (the MRDLG, municipalities) and environmental institutions and experts

Although the MoE is represented in the NRDC having responsibility to judge National Spatial Plan and related documents and planning regional level territorial plan, and some experts take part in different working groups, permanent collaboration and expertise in all levels and among all involved institutions is needed. Especially collaboration among the REBs, the Administrations of the SPNTs and municipalities at local level is important to keep track of territorial planning process ensuring environmental obligation integration there.

3.8. Financial Issues

3.8.1. Developing the capacity of particular units or sectors at the national, state, and local levels to identify potential sources of funding and prepare competitive proposals

3.8.1.1. Background

Currently capacity of particular units or sectors at the national, state, and local levels to identify potential sources of funding and prepare competitive project proposals is quite different. Performing in-depth analysis there was applied one ruling principle – reject all arguments like “there isn’t enough money to prepare good project proposals and finance their implementation”. Arguments of this kind are common at all levels and all types of entities.

Considerations on capacity constraint - institutional and availability of domestic finances for environmental projects in particular sectors - have implications on possible arrangements of international financing for projects. In many cases projects in climate change, biological diversity and land degradation are pure locally financed, but also important and specific external finance sources for climate change and biological diversity are available. In such cases local sources have to play role of co-financing, in most cases defined as due for project implementing entity by external financier. Co-financing schemes often are quite complicated and project preparation as well implementation requires specific knowledge. Such tasks are affordable only for limited circle of specialists, who are highly paid and in many cases not available for environmental sector because of non-competitive salaries.

Even, if specialists of environmental sector are trained to have necessary qualification, search of information on possible financing sources requires lot of time and efforts. Separately each financing institution has more or less detailed information on project application and financing conditions, but taking into account important differences between conditions and procedures, some integrated information would be desirable.

Resuming critical aspects of project preparation and identification of sources of funding, as key aspects could be identified issues of information and training, as well competitive salaries for specialists involved in process. There was also identified high fragmentation of information on available finance sources and funding conditions for specific project categories. Also was identified deficit of specific education and training of specialists working in environmental protection, improving their ability to deal with project preparation and implementation, especially with economic and finance matters.

3.8.1.2. Institutional Framework

Capacity of particular units or sectors at the national, state, and local levels to identify potential sources of funding and prepare competitive project proposals differs from case to case.

On the one hand differences in capacity could be secluded according to level of institution or unit in hierarchy of state administration or according to their scale. It’s characteristic that capacity deficit is observable mainly on bottom level – municipal administrations of small towns and counties, as well small enterprises and non-governmental organizations are lacking capacity most of all. Administrations of regional and state level governmental agencies and institutions, as well large enterprises are capable to manage project preparation and identification of possible finance sources quite well on their own.

In state administration specialized units for project preparation and implementation are created recently (e.g. Investment department, Project preparation department, Project implementation department – in Ministry of Environment.) Also Administration of Latvian Environmental Fund, Environmental Investment Fund, State enterprise “Vides Projekti” – Environmental Projects – as project financing and implementation institutions are directly involved.

Differences also could be secluded according to type and sector of planned activities. More possibilities to get finances for well-prepared project are in sectors where state policy is well defined and priorities supported with financing instruments. Such instruments are (i) programs and subprograms in state budget aimed to implement goals of particular thematic areas – climate change, biological diversity and land degradation. In some cases long-term programs are approved by the Cabinet of Ministers granting them status of National program – e.g. National program of Biological diversity. Budgetary programs are administrated as general ministerial policy implementation programs (Ministry of Environment and subordinated policy implementation institutions) or as (ii) earmarked resources for projects in particular sectors (for grant financing in Latvian Environmental Protection). In last case (ii) applicants for project financing could be all types of entities – small municipalities, enterprises, non-governmental organizations etc.

Setting priorities for different sectors of environmental policy certain amounts of money in mentioned programs and finance institutions are reserved also for climate change, biological diversity and land degradation. The smallest share, comparing three mentioned above, annually is allocated for land degradation projects – in budget of Latvian Environmental Protection Fund - approximately 1% of total resources allocated for sectoral projects. But the reason of such disproportion is caused by disproportion in scale of respective environmental problems in Latvia. Both considerations mentioned above (institutional aspects and availability of locally reserved finances for environmental projects in particular sectors) have implications on possible arrangements of international financing for projects. In many cases projects in climate change, biological diversity and land degradation are pure locally financed, but also specific external finance sources for climate change and biological diversity are available. In such cases local sources have to play role of co-financing, in most cases defined as due for project implementing entity by external financier.

Specific financing instruments are elaborated in Latvia to create co-financing schemes for particular projects. E.g. Latvian Environmental Investment Fund is Latvian / EU (PHARE) / NEFCO co-financed loan granting agency. The main objective of the Fund is, by combining local financial resources with the foreign ones, to finance environmentally friendly projects, granting long-term loans on favourable conditions for projects in private and public sectors. During its existence the Fund has supported projects in the sector of water handling facilities, including improvement of quality of drinking water, as well as sewage purification, in the sector of municipal waste management, including recycling, as well as in the sector of the ambient air pollution decrease, which includes also decrease of emission of CO₂. The Fund has financed several alternative energy production projects, which however are not recognized as the prior sector for the further work of the Fund. According to the EU directive “Integrated pollution prevention and control” and the Latvia law “On Pollution” an active work is developed to implement the Cleaner production principles in private enterprises by financing the replacement of equipment to such, which provides higher economy of resources and is more favorable for the environment.

Another important financing source is Latvian Environmental Protection Fund (LEPF) – grant financing source. It must be emphasized, that this particular source is the most comprehensive in

aims and covers climate change, biological diversity as well as land degradation. Aims of the Fund includes much more besides mentioned, and also financing of capacity building of environmental protection institutions. If to compare with Environmental Investment Fund (LEIF) some important differences have to be mentioned:

- Statute and mission statement of the LEIF clearly defines direct involvement and responsibility of fund's administration in achieving environmental policy goals. As opposite, LEPF (after reorganization, since 01.01.2004) is assumed only as budgetary program (source of financing, stock of money), and stuff of Administration of the LEPF is not anymore responsible on achievement of some policy goals – it, as institution, is separated from policy implementation and performs pure administration, accounting and project supervision functions.
- From previous arises (and is evident) different approach to potential project applicants – if LEIF is acting as proactive and interactive partner for applicants, then strategy of LEPF is purely reactive. As there was mentioned, within LEIF Cleaner Production Center consultancy activities are started. These different approaches are reflected also in information available about booth of funds in internet.

3.8.1.3. Selected Principal Causes

Fragmented information on financing sources available for projects.

Some (or even all) financing institutions are providing information on financing rules and conditions, but this information often is arranged in a way hard to find and compare. Also often information on good examples (success stories) is lacking. For inexperienced person current arrangement of information is creating more confusion than encouraging to start a project.

Insufficient assistance from financing institutions in preparation of project proposals.

In situation when potential applicants aren't confident about their competence, and in sectors in which project activities aren't based on wide experience and traditions, much more assistance and initiative from financing institutions would be desirable.

Shortage of financial and economic aspects in education and training of environmental specialists.

Main institution educating specialists for environmental sector in Latvia is Latvian University (Faculties of Biology, Geography, Chemistry, and Institute of Environmental Science and Management). Sadly, amount of lessons and practice on environmental economics, finance, project management, given to students in these specialties is completely insufficient to perform real work on project preparation and management. Even Latvian Banking School for Higher Education is providing much (3 times) more time for studying environmental economics.

Noncompetitive salaries for public employees in environmental sector, particularly involved in project preparation and management.

Detailed analysis is provided in separate section (See In depth analysis for the capacity constraint "Salaries of public employees in the environmental sector (including inspectors) are not sufficiently competitive with the private sector")

3.8.1.4. Key Barriers

There isn't appointed responsible institution to integrate information on available funding.

Barrier is of institution level. Some institution has to analyze all rules and conditions of financing institutions and provide comparable information to potential project applicants (target groups). Information could be provided publishing it on internet, preparing newsletters etc.

Insufficient use of proactive and interactive strategies in financing institutions.

Barrier is of institution level. Financing institutions have to hire additional staff to consult project applicants in early project preparation phase, to conduct training seminars, organize exchange of experience etc.

Environmental institutions (Ministry of Environment) are not discussing education programs (content aspects) with education institutions.

Barrier is of institution level. Coordination and more cooperation of education institutions and potential employers of graduates would be desirable.

3.8.2. Salaries of public employees in the environmental sector (including inspectors) are not sufficiently competitive with the private sector

3.8.2.1. Background

In Latvia salaries of employees in public sector according to the Law on Labour are set by regulations of Cabinet of Ministers and in some cases by special laws. Despite to several attempts in last ten year period to harmonize remuneration system in public sector, at the moment exist 28 specific regulations (list in annex 5) dealing with different categories of public employees (e.g.: civil servants, employees of budgetary institutions, employees of state and municipal agencies, medical personnel, judges, etc.) and constituting highly fragmented system. Such system causes important differences between salaries of employees of the same qualification level working in different branches of public administration. For example, average salary²⁶ of employees in the Ministry of Environment for year 2003 was LVL 214. At the same time for Ministry of Finance the same figure was LVL 442.

Also important differences between average salaries in public sector and private sector are evident. Despite to statistical data indicating higher (average) salaries in public sector, compared with private (this proportion is caused by different qualification structures), the same qualified work in private sector is paid in average two times higher than in public sector.

3.8.2.2. Institutional Framework

Current system of remuneration causes important differences between salaries of employees of the same qualification level working in different branches of public administration. For example, average salary of employees in the Ministry of Environment for year 2003 was LVL 214. At the same time for Ministry of Finance the same figure was LVL 442, for Ministry of Agriculture – LVL 214, and for Ministry of Welfare – LVL 351.

Currently an attempt to optimize salary system in public sector again is started. Government is planning to reduce number of different remuneration schemes and apply more compact classification:

1. group. Civil servants;
2. group. Employees of state budgetary institutions (intellectual workers);
3. group. Employees of state budgetary institutions (physical workers);
4. group – specific professional branches:

²⁶ Average salaries here and further on are given on monthly basis and before taxes (gross). Net salary accounts in average about 71 – 72% of gross.

- Judges and public prosecutors;
 - Pedagogues;
 - The military;
 - Medical and social care personnel;
5. group – managers and employees of state enterprises and statutory companies:
- Managers, members of board, state representatives;
 - Employees of state enterprises.

An average salary in institutions of the Ministry of Environment also varies in some range. For example, average salary for years 2002 and 2003 is given for some selected institutions²⁷:

Institution	Salary (LVL)	
	Year 2002	Year 2003
Ministry of Environment (central administration)	210	214
Environmental State Inspection	227	221
Rezekne Regional Environmental Board	215	235
Metropolitan Riga Regional Environmental Board	194	211
Latvian Environment Agency	239	235
Administration of Gauja National Park	188	223

As evident from figures, there is no important variance in salaries within system of environmental protection, including environmental inspection. Also it's evident, that better leveling within system for year 2003 is achieved, comparing with year 2002.

Another and the most important dimension of the problem is difference between average salaries in public and private sector, paid to specialists of the same qualification. For comparison are given (i) average salaries (for a country, both public and private sectors)²⁸ for some selected professions and (ii) typical salaries for respective qualification categories in state institutions. Selection is made to represent some relevance of professions to field of environmental protection (e.g. knowledge of natural sciences, law, data processing, project management) as well to represent general qualification level – senior specialists.

Profession	Profession Code	(i) Average salary rate (LVL)	(ii) State institutions: Qualification category ²⁹ / salary rate (LVL)
Senior specialists	2		
Physicists, chemists, biologists, etc	21	290	9 – 11 / 85 - 154
Data processing specialists	213	391	9 – 11 / 85 - 154
Other senior specialists	24		
Project management specialists	2414	382	9 – 11 / 85 - 154
Lawyers	242	349	9 – 11 / 85 - 154

²⁷ Data from Public reports of respective institutions.

²⁸ Source: survey data, Latvian Central Statistical Bureau, October, 2003 (LR Centrālās statistikas pārvaldes Profesiju apsekojuma rezultāti (uzņēmuma apsekojums) 2003. gada oktobrī)

²⁹ Qualification categories 9 – 11 represent all kinds of senior / leading specialists in state (budgetary) institutions.

Salary system established for employees of public institutions allows setting actual salary in some range, but, even assuming the highest remuneration rate applied, it's evident, that average salaries in a country for the same qualification are approximately two times higher. Such a situation causes migration of qualified specialists from the state sector to better paid positions in private sector. It results in high labour turnover rates and creation of temporal vacancies in state institutions. Using the last as a proxy to measure the phenomena, numbers³⁰ (vacancies per hundred of staff positions) are:

Sector of public administration (including all institutions)	Vacancies per hundred of staff positions		
	Civil servants	Employees of state institutions	Total
All sectors	10	12	11
Ministry of Environment	8	12	10
Ministry of Finance	7	4	6

Numbers indicate two trivial but important things – (i) vacancies rate (and presumably, labour turnover³¹) in system of environmental protection is close to average of the same for all public administration, and (ii) vacancies rate in much better paid sector (Ministry of Finance) is considerably lower.

3.8.2.3. Selected Principal Causes

Unharmonized system of remuneration in public administration.

Fragmented system of remuneration in public administration causes unequal conditions of competitiveness between different sectors of public administration, and consequently migration from sectors with lower salary rates to those with higher ones. Creation of preferential conditions for some specific sectors (“strengthening”) on another end causes qualification problems in other sectors, directly attracting best specialists and indirectly – causing increase in average salary rates nationwide, also stimulates migration to private sector. Summary effect of such policy is synergistically degrading for all the sectors of public administration, excluding those in preferable conditions.

Lack of adjustment mechanism for salaries in public sector according to market level (private sector).

Salaries in private sector are set by market forces and reflect (on one hand) willingness to pay for working efforts made by a person of some qualification, and (on another hand) willingness to accept compensation for making such efforts. Every attempt to introduce administratively regulated salaries in a labour market causes market distortions. To avoid negative consequences of administrative intervention in a market there must be taken some measures to adjust administratively set prices to market equilibrium level. E.g.: in case of public services provided by natural monopolies (water supply, central heating, electricity etc.) special regulatory procedure and regulatory body (tariff regulator) often are introduced. Setting rates for the state regulated salaries same level of care must be taken. Considering important share of state regulated salaries in total labour market, it could be assumed (and used) as stabilizing factor, but detailed labour market analysis has to be performed to avoid huge misbalances.

Disarrangement of financial and economic criteria in priorities.

³⁰ Data from: State Civil Service Administration; according to situation on 01.01.2003. (the latest available)

³¹ Direct numbers or estimates are not available for comparisons over sectors.

Financial approach to analysis assumes the money as universal and only value. In economic analysis money is used as means to express any other value. While not all of values in full scale can be measured by money, economic analysis is seeking for more complete accounting of values. Thinking, ordinary used in decision making, is based on economic approach. Nevertheless, in many cases, either situation for decision making is too complicated and can't be afforded by economic analysis, or decision makers prefer financial criteria for subjective reasons (interests).

In reality, this principal cause has impact on all the levels – systemic, institutional and individual, and much wider in scale if to compare with one particular capacity constraint. On systemic level, in context of currently analyzed capacity constraint, it represents as purely financial approach to budget compilation process. Pushing aside economic criteria and setting financial criteria as leading, also meaning included in efficiency is reduced. Consequently it causes diminution of weights for externalities, which principally are not reflected in financial assessments. It leads to making (financial) economy on salaries of specialists working in public sector and getting all problems (externalities) of high labour turnover, low qualification, prepossession to corruption, etc.

3.8.2.4. Key Barriers

Existing regulations setting salaries for employees in public sector aren't adjusting them to market levels.

This barrier is of system level and can be overcome only by principal reform of remuneration system in public sector.

Other but salary components in remuneration packages aren't widely used in public sector.

This barrier is affecting problem on a system and institutional level. As salary isn't only component of remuneration package, but the last one includes (or may include) also opportunities for education and training, development of professional contacts, traveling, employers paid insurance, transportation and communication costs etc. Not all of them are permitted by existing legislation on remuneration of employees in public sector, but also those permissible aren't used explicitly in full scale. Private employers are providing wide range of non-salary type benefits therefore increasing their competitiveness in labour market even more.

Outsourcing isn't used in all the cases where appropriate.

Some services in public sector (legal, computational, transportation, technical etc.) not specifically related to public administration itself might be outsourced to private service providers. Outsourcing, on one hand allows to overcome limitations set by public sector salary rates and attract specialists of better qualification, and on another hand allows to economize finances if performance of such technical services need not full time employees. Disadvantage of outsourcing is lack of continuity in knowledge and technological solutions if contractor is changing.

Reformulated or Proposed Actions to Address Priority Capacity Needs/Constraints (These actions require time frames that indicate when they are likely to be accomplished. One approach would be to designate them as short-term, medium-term, or long-term and define those categories, i.e. medium-term = 12- 24 months)

*approved actions that appear in italics would address more than one priority need/constraint within a particular focal area

Priority Needs/Constraints: Climate Change	
Existing policy planning documents do not adequately incorporate global environmental considerations related to air protection	
Identified Causes/Barriers	Approved Actions/Activities

<p>Existing documents related to air protection are not consistent with emerging EU legislation and priorities.</p> <p>Inability to ensure compliance with all requirements of the EU environmental monitoring.</p> <p>Insufficient institutional co-operation.</p> <p>The number of branch experts is insufficient.</p> <p>Insufficient human and financial capacity; Increased differences in qualification between environmental specialist who work long time and who start to work and an extra work by training.</p> <p>Frequent changes in legislative acts because of the very short and compressed terms for transposition of EU legislative requirements. (This problem does not seem to be addressed by any of the recommended actions/activities. Will it be addressed by the first or the second? If so, they should mention legislative development explicitly.)</p> <p>Lack of action plan for the implementation of the Air and Climate Change Chapter of the National Environmental Monitoring program (NEMP).</p>	<p><i>A new policy document – “The Climate Change Mitigation Program 2005-2010” (CCMP)³² has been elaborated (adopted by the Cabinet of Ministers (CoM) on 6 April 2005), covering:</i></p> <ul style="list-style-type: none"> <i>- national system for estimating GHG emissions and removals;</i> <i>- improvement of data quality;</i> <i>- increased capacity of human resources;</i> <i>- support to scientific research;</i> <i>- preparedness of Latvia to participate in regional and global GHG trading systems.</i> <p><i>The implementation and regular updating of this programme as specified in chapters 9 and 10 will be the basis ensuring continuous compliance with the EU climate change legislation and international commitments.</i></p> <p><i>The MoE will obligate the LEGMA³³ to update the Air and Climate Change Chapter of the NEMP and to develop an action plan for the implementation of the chapter. (When?)</i></p> <p>Adequate financing for business travels ensuring participation in the in expert working groups organized by Directorate General of Environment of European Commission will be planned in the budget of the MoE for 2006.</p> <p><i>The recently established³⁴ Climate and Renewable Energy Department of the MoE will act as the coordination centre for distribution of information, and cooperation among state institutions and NGOs.</i></p>
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Priority Needs/Constraints: Climate Change	
Existing policy planning documents do not adequately incorporate global environmental considerations related to air protection	
Identified Causes/Barriers	Approved Actions/Activities
	<i>From year 2006 extra funding is budgeted for increasing human-resources capacity (what is meant by this? An increase in staff? Training?) of institutions that collect data, perform calculations and prepare reports on GHG emissions (LEGMA, the Ministry of Agriculture (MoA), the Ministry of Traffic (MoT), the Central Statistical Bureau of Latvia).</i>

³² Decision No 280/2004/ED of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

³³ According to “The MoE Development Strategy 2005- 2007”, the Latvian Environment Agency, the State Geological Survey and the Latvian Hydrometeorological Agency was reorganized and the Latvian Environment, Geological and Meteorological Agency (LEGMA) established instead; all functions of these institutions now is under the LEGMA authority.

³⁴ Established in 1 of October 2004 according to the “MoE Development Strategy for 2005- 2007” (2.1.7.-1)

Priority Needs/Constraints: Climate Change	
Lack of an operational system (including monitoring and reporting) to facilitate participation in existing or future regional and global GHG trading systems and other flexible implementation mechanisms	
Identified Causes/Barriers	Approved Actions/Activities
<p>Lack of awareness, understanding, or support amongst key decision- makers for preparing Latvia to participate in regional and global GHG trading systems, etc.</p> <p>There is insufficient coordination between LEA³⁵, the ministries and other institutions.</p> <p>No explicit official mandate to branch institutions for data collection, GHG inventory and reporting for UNFCCC purposes.</p> <p>Lack of financial and human capacity to establish, develop and maintain an operating national system for data collection, emission calculation and reporting on GHG emissions and GHG emissions trading.</p> <p>Insufficient scientific basis to get new and relevant data/information essential for National reports on GHG emissions and removals; no researches, particularly lack of branch scientists, technical provision, lack of regular government order for focused research and insufficient financial support.</p> <p>Lack of quality assessment and quality control system (QA/QC)</p>	<p>The Ministry of Environment will develop and implement a briefing strategy specifically designed to inform high-level technical and political decision-makers of the economic and technical opportunities that regional and global GHG trading systems and other flexible implementation mechanisms will provide for Latvia till the end of 2005. (seems too cover too short a timeframe. Recommend covering issues through the end of 2006.)</p> <p>The strategy will be developed and institutional system defined for participation in global GHG trading system by the end of 2007 (CCMP 9-7., 9., 28.). (Who will develop this?)</p> <p><i>The recently established³⁶ Climate and Renewable Energy Department of the MoE will act as the coordination centre for distribution of information, and cooperation among state institutions and NGOs.</i></p> <p>The national system for annual GHG inventories and reporting obligations, including the mandate to responsible institutions for data collection, emissions calculation and preparation of reports has been defined (CCMP 8.1.1.).</p> <p>A national system for the preparation of projections of GHG emissions and removals will be developed in 2006 (CCMP 9-27). (By who?)</p>

³⁵ According to “The MoE Development Strategy 2005- 2007”, the Latvian Environment Agency, the State Geological Survey and the Latvian Hydrometeorological Agency was reorganized and the Latvian Environment, Geological and Meteorological Agency (LEGMA) established instead; all functions of these institutions now is under the LEGMA authority.

³⁶ Established in 1 of October 2004 according to the “MoE Development Strategy for 2005- 2007” (2.1.7.-1)

Priority Needs/Constraints: Climate Change	
Lack of an operational system (including monitoring and reporting) to facilitate participation in existing or future regional and global GHG trading systems and other flexible implementation mechanisms	
Identified Causes/Barriers	Approved Actions/Activities
for preparation of annual calculations and reports about GHG emission and removals.	<p>In year 2005 the MoE will develop and carry out a training course to improve the GHG emissions and removals inventory performance (CCMP 9-24). (A single training course is a rather limited, one-time only action unless that course “belongs” to an appropriate institution and can be run more than once.)</p> <p><i>From year 2006 extra funding is budgeted for increasing human-resources capacity of institutions that collect data, perform calculations and prepare reports on GHG emissions (LEGMA, the MoA, the MoT, the Central Statistical Bureau of Latvia).</i></p> <p>From year 2005 regular financing is planned for research projects aimed at improving data quality, including national emission factors, assumptions and variance analysis (CCMP 9-31), as well as investigating the impacts of, and vulnerability and adoption to, climate change (CCMP 9-32).</p> <p>In 2006 the statistical data collection forms and databases for GHG emissions calculations will be updated to include the missing information and clarify classification (CCMP 9-19), new forms and software will be developed to collect and process data regarding HFC, PFC and SF6 emissions (CCMP 9-20).</p>

Priority Needs/Constraints: Climate Change	
Lack of an operational system (including monitoring and reporting) to facilitate participation in existing or future regional and global GHG trading systems and other flexible implementation mechanisms	
Identified Causes/Barriers	Approved Actions/Activities
	<p>Independent experts of the relevant economic sectors will annually perform quality assurance and quality control (QA/QC) process of the national GHG inventory report (CCMP 8.1.1.). (How? Who will oversee this QA/QC process? How will it be financed?)</p> <p>By the end of 2005, MoE will develop a project proposal on development of data compilation and policy analysis system to support the climate change policy planning process within the Norwegian Financial Instrument³⁷.</p>

³⁷ According to the Norwegian Financial Mechanism's "MEMORANDUM OF UNDERSTANDING ON THE IMPLEMENTATION OF THE NORWEGIAN FINANCIAL MECHANISM 2004-2009 ESTABLISHED IN ACCORDANCE WITH THE AGREEMENT OF 14.10.2003 BETWEEN THE KINGDOM OF NORWAY AND THE EUROPEAN COMMUNITY ON A NORWEGIAN FINANCIAL MECHANISM FOR THE PERIOD 2004-2009" has been signed and approved by the Cabinet of Ministers Rules Nr. 924 on November 9, 2004.

Priority Needs/Constraints: Biodiversity	
SPNT-related compensation and incentive programs for landowners are not fully operational and / or sufficiently understood by key stakeholders	
Identified Causes/Barriers	Approved Actions/Activities
<p>Landowners believe that SPNTs are only temporary, legal fictions that will evaporate once any level of economic pressure is felt nationally or locally.</p> <p>Not all farmers are informed about possibilities to get subsidies.</p> <p>The bureaucracy and the huge amount of paperwork involved in applying for the subsidies.</p> <p>The lack of necessary cartographic material, necessary for payment of the subsidies for landowners in “old” SPNTs.</p> <p>Relatively high percentage of SPNT from total territory of Latvia (11,8%).</p> <p>The lack of necessary cartographic material, necessary for payment of the subsidies for landowners in “old” SPNTs.</p>	<p>Awareness-rising campaigns for local municipalities and landowners on SPNTs management issues (int.al., financial support) are included in the MoE Nature protection department’s (NPD) work plan for 2005. Awareness raising activities are also planned within the ongoing LIFE Nature projects till the end of 2010³⁸. In 2005 the MoE is preparing and will conduct training³⁹ for the assessment of proposed plan or project on the Natura 2000 site, in accordance with the EU Habitats Directive.</p> <p><i>Till the end of 2007 the MoE will establish regional structures of the Nature Protection Board (NPB)⁴⁰ to contribute in actual information of SPNT management conveying to local level stakeholders (esp. landowners).</i></p> <p>In 2004 the NPB has developed digital maps and transferred to the Rural Support Service to facilitate payments to landowners as provided in the Rural development plan. Application for payments for Natura 2000 territories will start in April 2005 along with other agriculture subsidies.</p> <p>The MoE will inform the State Chancellery or State Land Service about necessity to actualise implementation of the article 14. –1. of the law “On Protected Nature Territories”⁴¹. (This seems very weak. Recommend a more concrete action such as the establishment of a task force or working group on the issue.)</p>

³⁸ series of seminars and workshops will be organized to inform on issues related to nature protection in general, management of different habitats in particular providing information on available financial support, management issues, etc. Employees of Nature protection department of the MoE as well as the NPB participate as invited speakers at different workshops and giving information on issues relating to SPNT; similar workshops with focus on ca. 25 SPNT (ca. 35 municipalities) have been already convened and/or planned by EU LIFE projects and UNDP/GEF project "Protection of biodiversity in North Vidzeme Biosphere reserve" as well as in the projects implemented by Baltic Environmental Forum.

³⁹ Since 2000 the State Environmental Inspectorate (since 2005 State Environment Service) is providing training twice a year.

Priority Needs/Constraints: Biodiversity	
SPNT-related compensation and incentive programs for landowners are not fully operational and / or sufficiently understood by key stakeholders	
Identified Causes/Barriers	Approved Actions/Activities
<p>The draft “Law On Landowners’ Rights to Compensations for Restrictions of Economic Activities in Protected Territories” addresses only compensations for forestlands in SPNTs.</p>	<p>In 2003 the MoE has elaborated of law “On the rights of land owners on the compensation for the restriction of economic activity in the specially protected nature territories”,⁴² which is approved in the Parliament in the 2nd reading. Related regulations (6 in total) of the Cabinet of Ministers will be developed after the adoption of the law. Approval of initiated legislation will provide allocation of compensations in the state budget for coming years.</p> <p><i>Since November 4, 2004 the CoM regulations No 883 “Regulations On Local Municipality Territorial Planning” is in force providing explicit environmental obligations that should be incorporated in territorial plans of municipalities.</i></p>

⁴⁰ According to “The MoE Development Strategy 2005- 2007” (2.3.8.- 1.); establishment depends of the availability of financial resources.

⁴¹ According to the law “On Protected Nature Territories” the State Land Service’s responsibility is designation of SPNT borders.

⁴² Law has passed two readings in the Parliament (by 13.04.2005.).

Priority Needs/Constraints: Biodiversity	
The SPNT management mechanism/system is inadequate, particularly with respect to the integration of existing regional and municipal authorities	
Identified Causes/Barriers	Approved Actions/Activities
<p>Two different ministries supervise the environmental protection and the regional development.</p> <p>Only in some SPNTs there are their own administrative structures, which are located in this territory and can in the daily work involve local municipalities and local community.</p> <p>Lack of competence and willingness in both, municipalities and administrative structures of SPNTs, to cooperate and to develop common projects for appropriate management of SPNTs.</p> <p>Lack of competence and willingness in both, municipalities and administrative structures of SPNTs, to cooperate and to develop common projects for appropriate management of SPNTs.</p> <p>Not all landowners know the management options of their land located in the SPNT.</p> <p>Development of the nature conservation plan for a particular territory is not financially linked with the implementation of this plan</p> <p>Although the formal responsibilities of key stakeholders involved in the management of SPNTs</p>	<p><i>MoE will encourage stronger collaboration between state nature protection institutions and ongoing EU LIFE projects in promotion of management support (int.al., information campaigns); the cooperation between the MoE and the MoA will be promoted. (Weak. Vague. How will such collaboration be encouraged?)</i></p> <p>The MoE and the Rural Support Service will continue cooperation to promote more effective planning and realization of awareness-raising campaigns on SPNT-related compensation and incentive programs for landowners. (Give examples of the kind of cooperation that has already occurred and how it will be improved?)</p> <p>In 2006 the MoE will initiate a pilot project to take stock of important SPNT territories (estimating the amount of particularly important territories, ownership, value, etc.) in different zones of Riga district (e.g., Garkalne, Saulkrasti, a.o.) to prepare the justification for the compensation of income foregone for municipalities providing the tax exemptions for private landowners within the SPNT.</p> <p>In 2005 amendments in the law “On Specially Protected Nature Territories” (1993) are elaborated:</p> <ol style="list-style-type: none"> 1) simplifying approach to the individual regulations on protection and management of particular SPNT; 2) simplifying several issues related to the establishment, management, etc. of SPNT as well as clarifying responsibility of different actors in the SPNT field (int.al., mainstreaming collaboration between the NPB and municipalities on SPNTs

Priority Needs/Constraints: Biodiversity	
The SPNT management mechanism/system is inadequate, particularly with respect to the integration of existing regional and municipal authorities	
Identified Causes/Barriers	Approved Actions/Activities
<p>are set in the legislation, there is no concrete state strategic vision on real implementation of the management</p> <p>The most of the lands in the SPNTs are owned by private land owners</p> <p>Relatively high percentage of SPNT from total territory of Latvia (11,8%)</p> <p>Lack of awareness about compensation mechanisms in SPNTs of high-level decision makers in Cabinet of Ministers and Parliament</p>	<p>management);</p> <p><i>3) specifying that Nature Protection Plan is legally binding to planning and decision-making processes of other Ministries thus ensuring that SPNT management requirements are considered.</i></p>

Priority Needs/Constraints: Land Degradation	
Lack of Integrated Soil Research Program	
Identified Causes/Barriers	Approved Actions/Activities (Very Good Actions)
<p>Lack of a long-term state procurement strategy for applied science.</p> <p>Sustainable land management (including soil protection) approach was not a priority for state policy until ratification of UNCCD and initiation of this approach at the EU level.</p> <p>Insufficient number of soil experts.</p> <p>Lack of national soil strategy and the UNCCD implementation plan.</p> <p>The one-year applied science projects supported by the Ministry of Environment are insignificant to undertake integrated soil research program.</p> <p>Restricted state budget allocated for theoretical and applied research.</p> <p>Grant administration system is not transparent enough</p> <p>Insufficient number of new scientists in the nature sciences due to the inconsistent state level planning of necessary specialists for the coming years.</p>	<p><i>In 2005 the MoE will organize development of a long-term state procurement strategy for the applied environmental sciences (int. al., prepare concrete recommendations how to improve existing grant allocation mechanisms). The Environmental Science & Education Council⁴³ will be involved to advise and succeed the process.</i></p> <p><i>In 2005 the MoE will recommend the Advisory Board on Agriculture & Environmental Protection⁴⁴ to initiate and supervise development of Integrated Soil Research and Monitoring Program in compliance with UNCCD management goals and current EU deliberations on the development of Soil strategy package. The MoE will recommend enlarging of the Advisory Board on Agriculture & Environmental Protection with representative of the Ministry of Regional Development and Local Governments (MRDLG).</i></p> <p>The MoE in accordance with EU Soil strategy will conduct a technology needs assessment/survey in support of an Integrated Soil Research Program that covers independent scientific research institutions and university laboratories as well as public laboratories and make recommendations for how EU structural fund projects for next programming period (2007- 2013).</p>

⁴³ Established in 1st of June, 2004 by the MoE and consists of representatives of Latvian Academy of Sciences, main universities (University of Latvia, Latvian University of Agriculture, et.al.), MoE and Ministry of Education and Sciences.

⁴⁴ Established by Ministry of Agriculture and MoE in 1995, amended in 2004.

Priority Needs/Constraints: Land Degradation	
Lack of Integrated Soil Research Program	
Identified Causes/Barriers	Approved Actions/Activities (Very Good Actions)

Priority Needs/Constraints: Land Degradation	
Existing soil monitoring is inadequate and requires a more comprehensive and integrated approach	
Identified Causes/Barriers	Approved Actions/Activities
<p>Integrated sustainable land management (including soil protection) approach was not a priority for state policy until ratification of UNCCD and initiation of this approach at the EU level.</p> <p>The NEMP is not sufficiently comprehensible in relation to integrated soil monitoring approach.</p> <p>Lack of national soil strategy and the National Action Plan of the UNCCD.</p> <p>Poor coordination among the key institutions collecting the information on the land issues.</p> <p>Lack of state environmental monitoring policy.</p> <p>Lack of permanent state funding for the execution of the NEMP (int. al. sub-programmes devoted to soil monitoring).</p> <p>Existing soil information is not summarized (finalized).</p> <p>Lack of coordination mechanism among key institutions involved in the soil information management and subordinated to different ministries (exchange of information; updating existing soil</p>	<p>The Advisory Board on Agriculture & Environmental Protection will initiate compilation, evaluation, and summarization of the existing information on soils as part of the preparation of a baseline study in support of the establishment of an Integrated Soil Research and Monitoring Program.</p> <p>The MoE will supervise revision of the National Environmental Monitoring Program (NEMP)⁴⁵ to ensure that soil monitoring is appropriately integrated as a subcomponent into relevant monitoring components (i.e. forest monitoring).</p>

⁴⁵ Since April 2005 the revision of NEMP (int al., Chapters relevant to the soil monitoring) is undertaken on a basis of the LEGMA contract with private consulting company

<p>information).</p> <p>Lack of defined and approved integrated soil management (environmental protection) objectives.</p>	
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Priority Needs/Constraints: Land Degradation	
Insufficient capacity and financial resources to prepare the Implementation Strategy (the National Action Plan) for implementing the UNCCD	
Identified Causes/Barriers	Approved Actions/Activities
<p>Integrated sustainable land management (including soil protection) approach was not a priority for state policy until ratification of UNCCD and initiation of this approach at the EU level.</p> <p>Lack of awareness/support amongst key decision-makers to phase in integrated land management approach.</p> <p>Insufficient number of positions provided for work with the land management issues in the MoE.</p> <p>Restricted financial possibilities of the MoE to attract competent professionals.</p> <p>A real collaboration mechanism among soil experts, involved institutions and the MoE (including the NFP) is not established.</p> <p>Lack of comprehensive assessment of existing situation.</p> <p>Lack of actual and updated information.</p>	<p>The NSDC will work closely with The Advisory Board on Agriculture & Environmental Protection on land degradation and soil management issues and will consider establishment of a special working group on Land Degradation and Soil Management Issues under NSDC by the end of 2005, if necessary. (Very weak. Recommend preparing a formal analysis to determine whether such a special working group is needed or could be valuable.)</p> <p>The MoE will identify and commit the necessary financial and technical resources to develop Latvia's National Implementation Plan (Implementation Strategy) for the UNCCD within the context of EU deliberations on a the Soil Strategy. MoE will approach the MoF, the CoM on this issue and the Parliament of Latvia during discussions on the budget if necessary⁴⁶.</p>

⁴⁶ Action is included in UNDP/GEF project proposal "Building Sustainable Capacity and Ownership to Implement UNCCD objectives in Latvia"

Priority Needs/Constraints: Environmental Monitoring, Information Management and scientific research	
Lack of an Integrated State Environmental Information System (ISEIS) including GIS component and an Internet- based environmental portal	
Identified Causes/Barriers	Approved Actions/Activities
<p>Insufficient implementation of current legal acts in the field of environmental information exchange.</p> <p>The measures on coordination of information technologies application are oriented mainly to the institutions subordinated to Ministry of Environment and not include institutions subordinated to another ministries.</p> <p>Weak environmental legislation defining development of Integrated State Environment Information System and streamlining data flows and responsibility of institutions</p> <p>Insufficient awareness of high-level decision makers on the significance of ISEIS.</p> <p>Insufficient reliability and compatibility of the environmental data.</p> <p>Lack of freely available information system on environmental projects carried out in Latvia. Information systems' development process often does not include full system analyses according to IS development standards of Latvia.</p> <p>Standards for development of state cartographical</p>	<p>In 2005 the MoE will initiate development of Integrated State Environmental Information System (ISEIS) concept. The evaluation of current situation in IT field in each of institutions subordinated to the MoE will be carried out on the base of independent IS audit (to clarify available information and possibilities to arrange the system). The concept will provide:</p> <ul style="list-style-type: none"> - institutional responsibilities; - structure and types of data included into ISEIS (int. al., common classification system and data flows; - environmental information access criteria (defining information for free and information for minimal cost) for information that is gathered by the means of state budget; - involved institutions' data gathering and dissemination responsibilities; - initialisation, acceptance and registration of environmental IT projects, etc. <p>ISEIS concept's recommendations will be adopted in new law On Environmental Protection and binding CoM regulations that will be initiated by MoE during 2005 as well as in other related legislation in force.</p> <p>The MoE will demand the LEGMA to take stock of existing state GIS standards. The action will be included in the LEMGA work plan for 2006.</p> <p>In 2005 the MoE will inform the Secretariat of Minister for Special Assignment for Electronic Government Affairs on indispensability to ensure of GIS development in Latvia and take up of the implementation of the "Concept of State GIS Model".</p>

products are not defined.	
Insufficient cross-ministerial coordination mechanisms to incorporate environmental information into IS of another sectors.	
Priority Needs/Constraints: Environmental Monitoring, Information Management and scientific research	
Insufficient or inconsistent levels of funding for environmental monitoring and data collection; a lack of state level policy and strategy for environmental monitoring	
Identified Causes/Barriers	Approved Actions/Activities
<p>Weak basic normative act on environmental monitoring</p> <p>Insufficient collaboration of institutions engaged in environmental monitoring</p> <p>The amount of monitoring budget depends on yearly project</p> <p>Insufficient awareness and support from key decision-makers</p> <p>Inconsistent legislative framework stipulating monitoring responsibilities</p> <p>Lack of decision-makers oriented environmental assessment based on monitoring results</p> <p>The NEMP is not based on the environmental</p>	<p><i>A new law project On Environmental Protection that will be initiated by the MoE during 2005 will cover state level environmental monitoring providing:</i></p> <ul style="list-style-type: none"> - <i>the definition of state environmental monitoring;</i> - <i>institutional responsibilities (not only MoE, but also other ministries);</i> - <i>responsible institution for coordination of environmental monitoring at national level by sectors;</i> - <i>mechanism for implementation of the National Environmental Monitoring Program.</i> <p><i>In 2005 the MoE in collaboration with the Ministry of Agriculture, Ministry of Defence, Ministry of Traffic and Ministry of regional Development and Local Governments will initiate development of a Environmental Monitoring Funding Concept covering all kinds of environmental monitoring (state (cross- sectoral, sectoral), self- monitoring, volunteer monitoring, etc.).</i></p> <p>From 2005 regular state funding for the implementation (int. al., investments) of the NEMP will be provided⁴⁷.</p>

⁴⁷ According to the MoE Development Strategy 2005- 2007 (2.5.7.- 2)

management objectives	<p>In April 2005 the LEGMA has undertaken the revision of some chapters of the NEMP⁴⁸.</p> <p><i>The MoE will demand the LEMGA to make a complex review of the National Environmental Monitoring Program (int.al., all revised parts) to assess its compliance with specific management goals set forth for the various focal areas in relevant official documents and plans and estimate all sub-program integrity. The action will be included in the LEMGA work plan for 2006.</i></p> <p><i>The MoE will demand the LEGMA to take up monitoring of Climate Changes of NEMP by introducing changes in governance agreement between the MoE and the LEMGA⁴⁹.</i></p>
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⁴⁸ Chapter of Biological Diversity, Chapter of Terrestrial Environment and its Components, Subprogram of Agricultural Run-off monitoring and Sub-program of Marine Water monitoring on a basis of contract with private company; revision of Surface Water Monitoring sub-programm is taken by the LEMHA itself.

Priority Needs/Constraints: Environmental Monitoring, Information Management and scientific research	
Lack of a unit or program dedicated to making more effective use of existing environmental information centres and supporting the establishment of new ones	
Identified Causes/Barriers	Approved Actions/Activities
<p>Environmental information availability and public involvement into decision making process was not a priority issue in recent environmental policy.</p> <p>Low public activity and participation in decision making process.</p> <p>There is no defined environmental information of public access (funded by state allocated budget).</p> <p>Responsibilities of environmental institutions are not defined properly respecting environmental information exchange and public information.</p> <p>Lack of State Environmental Information System (SEIS).</p> <p>Insufficient human capacity (number of experts) of local EIC (REBs, Administrations of SPNTs).</p> <p>In most cases EIC have no full time employee but as additional duty of inspector or expert.</p> <p>Accessibility of the EIC is limited by working hours.</p>	<p>By implementing “The MoE of Development Strategy 2005- 2007” establishment of the Environmental Information and Education Centre (EIEC) by the State Environment Survey (SES) will be reconsidered⁵⁰. In this case the human capacity of the SES dealing with public information will be strengthened.</p> <p><i>The MoE will develop existing information centres⁵¹ of the REBs as supporting bodies of the EIEC at local level in 2007. The information provided in regional bodies will be linked to overall state environmental policy goals (int. al those defined in three Rio conventions). The EIEC action will be coordinated with information centres of municipalities, Tourism Information Centres and the Latvian Agriculture Advisory and Training Centres.</i></p> <p>Other recommendations/actions are provided in previous section</p>

⁵⁰ According to “The MoE of Development Strategy 2005- 2007” (2.1.7.-4) the it is planned by the MoE

⁵¹ According to “The MoE of Development Strategy 2005- 2007” (2.2.7.-9)

Priority Needs/Constraints: Environmental Monitoring, Information Management and scientific research	
Lack of a unit or program dedicated to making more effective use of existing environmental information centres and supporting the establishment of new ones	
Identified Causes/Barriers	Approved Actions/Activities
<p>Lack of permanent funding; outdated equipment of local EICs.</p> <p>User-friendly and target oriented environmental information is not sufficient.</p>	

Priority Needs/Constraints: Environmental Monitoring, Information Management and scientific research	
Lack of scientific research related to the three Rio conventions, including ministerial procurements, approvals, and cooperation	
Identified Causes/Barriers	Approved Actions/Activities
<p>Lack of funding for applied research.</p> <p>Poor or misguided understanding of the significance of applied research in the implementation of three Rio conventions.</p> <p>Inadequate number of officials and lack of their expertise in the line Ministries to formulate state procurement for the applied research needed for conventions.</p> <p>Lack of an effective inter-ministerial coordination mechanism regarding applied science.</p> <p>Unwillingness of scientists to share their data gathered in different projects (even co-financed by state budget) with state institutions (e.g. Latvian Environment Agency, etc.).</p> <p>Grant administration system is not transparent enough.</p> <p>Outdated research infrastructure (the facilities, equipment, etc.).</p> <p>The lack of co-financing to apply for EU funds.</p>	<p><i>In 2006 the MoE will organize development of a long-term state procurement strategy for the applied environmental and natural sciences. The Environmental Science & Education Council⁵² will be involved to advise and succeed the process.</i></p> <p><i>The MoE together with the Environmental Science & Education Council will recommend the Ministry of Education and Science (MoES) to revise existing grant allocation mechanism funded by the state budget. Proposed mechanism could be the following:</i></p> <ul style="list-style-type: none"> <i>- first level expertise by expert of the Latvian Council of Science and independent foreign expert in given field;</i> <i>- second level expertise by the officials of the ministries responsible for the particular field.</i> <p>The MoE will recommend the MoES to elaborate the CoM Regulations that will set the order for submission of data obtained within different state financed and co-financed scientific (int. al. grants allocated by Latvian Council of Sciences) projects to the related ministry or its subordinated institution. (Weak. How about preparing a set of specific recommendations and presenting them to MoES?)</p>

⁵² Established in 1st of June, 2004 by the MoE and consists of representatives of Latvian Academy of Sciences, main universities (University of Latvia, Latvian University of Agriculture, et.al.), MoE and Ministry of Education and Sciences.

Priority Needs/Constraints: Environmental Monitoring, Information Management and scientific research	
Lack of scientific research related to the three Rio conventions, including ministerial procurements, approvals, and cooperation	
Identified Causes/Barriers	Approved Actions/Activities
<p>The lack of young researchers.</p> <p>Insufficient funding for the research activities and lack of the necessary infrastructure result in outflow of the most qualified specialists, especially younger ones from the country or to the private sector that is not related to research activities.</p>	

Priority Needs/Constraints: Territorial Planning and Common Land Policy	
Territorial development plans do not adequately incorporate environmental protection obligations and requirements, including those involving the implementation of the conventions	
Identified Causes/Barriers	Approved Actions/Activities
<p>Poor collaboration among institutions engaged in territorial planning and environmental protection.</p> <p>Inconsistent legal framework to be in compliance with environmental obligations.</p> <p>Low awareness of environmental issues amongst decision makers of municipalities.</p> <p>Insufficient capacity of REB to ensure compliance with environmental obligations.</p> <p>Low capacity of small sized municipalities to attract and retain staff with environmental expertise or environmental experts.</p> <p>Lack of guidance on environmental obligations relevant to territorial planning.</p> <p>Nature Protection Plans are not elaborated for all SPNT.</p> <p>High-level decision makers of the MoE insufficiently govern collaboration with institutions engaged in territorial planning (the MRDLG, municipalities) and</p>	<p>The MoE and the Ministry of Regional Development and Local Governments (MRDLG) will continue collaboration within the National Regional Development Council⁵³ (at the ministerial level) and common expert working groups (at expert level). (Weak and vague. Recommend the preparation of a specific policy paper or report.)</p> <p>The MoE will focus additional time and resources on strengthening the network of Regional Environmental Boards, SPNT administrations, NPB by increasing their staff and budgets, where necessary and appropriate, and conducting a range of capacity development activities tailored to the needs of each board by implementation of “The MoE Development Strategy 2005- 2007”.</p> <p>From 2005 the MRDLG will inform the MoE on special training or information needs of local municipalities and other key parties in relation to observation and incorporation of environmental legal requirements and policies into the development and implementation of territorial plans.</p> <p>Since 04.11.2004. CoM Regulations “Local Municipality Territorial Planning Regulations” is in force including unambiguous environmental requirements and addressing adjustment of strategic environmental impact assessment for Territorial Plans in force.</p>

⁵³ Working since 2003

environmental institutions and experts.	
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Priority Needs/Constraints: Territorial Planning and Common Land Policy	
Lack of an integrated land use policy that incorporates all relevant sectors, not just agriculture and forestry	
Identified Causes/Barriers	Approved Actions/Activities
<p>Inconsistent institutional framework and responsibilities.</p> <p>Insufficient awareness and support of high-level decision makers to bind national, sectoral and spatial planning policy.</p> <p>Frequent change of governments (cabinet).</p> <p>The MJ action to govern state land policy is insufficient.</p> <p>Inconsistent legislative framework.</p> <p>Insufficient inter-ministerial coordination on land issues.</p> <p>Insufficient number of employees dealing with land policy related issues.</p> <p>State budget that is allocated to the SLS limits actions devoted to land monitoring and land use control.</p>	<p>The capacity constraint will be addressed within the UNDP/GEF project “Building Sustainable Capacity and Ownership to Implement UNCCD objectives in Latvia”⁵⁴</p> <p><i>The MoE will inform the Sustainable Development Council⁵⁵ on issues of national land use policy (int.al., proposal to establish Inter-ministerial Coordination Council representing of members of all key ministries and institutions involved into land management issues) by undertaking the UNDP/GEF project “Building Sustainable Capacity and Ownership to Implement UNCCD objectives in Latvia”⁵⁶</i></p>

⁵⁴ the project proposal is in final approval (15.04.2005.), project period- 3 years.

⁵⁵ Working since 2003

⁵⁶ the project proposal is in final approval (15.04.2005.), project period- 3 years

Priority Needs/Constraints: Financial, Legal, and Administrative	
Salaries of public employees in the environmental sector (including inspectors) are not sufficiently competitive with the private sector	
Identified Causes/Barriers	Approved Actions/Activities
<p>Unharmonized system of remuneration in public administration</p> <p>Lack of adjustment mechanism for salaries in public sector according to market level (private sector)</p> <p>Disarrangement of financial and economic criteria in priorities</p> <p>Existing regulations setting salaries for employees in public sector aren't adjusting them to market levels Other but salary components in remuneration packages aren't widely used in public sector</p>	<p>The CoM has adopted “Concept On Common Remuneration System for Public Sector Employees”(15.02.2005).</p> <p><i>The MoE will commission a study to examine how the disparities in salaries and benefits between public sector institutions and between the public and private sectors affect morale, retention, and performance. (Recommend that this study by co-sponsored with the State Chancelery or a similar high-level</i></p>

Priority Needs/Constraints: Financial, Legal, and Administrative	
Developing the capacity of particular units or sectors at the national, state, and local levels to identify potential sources of funding and prepare competitive proposals	
Identified Causes/Barriers	Approved Actions/Activities
<p>Fragmented information on financing sources available for projects.</p> <p>Insufficient assistance from financing institutions in preparation of project proposals.</p> <p>Shortage of financial and economic aspects in education and training of environmental specialists.</p> <p>Noncompetitive salaries for public employees in environmental sector, particularly involved in project preparation and management.</p> <p>There isn't appointed responsible institution to integrate information on available funding.</p> <p>Insufficient use of proactive and interactive strategies in financing institutions.</p> <p>Environmental institutions (Ministry of Environment) are not discussing education programs (content aspects) with education institutions.</p>	<p>The MoE will establish an information clearinghouse and training program on environmental project finance as part of the proposed Environmental Information and Education Centre⁵⁷.</p>

⁵⁷ According to "The MoE of Development Strategy 2005- 2007" (2.1.7.-4)

Priority Needs/Constraints: Environmental Education and Public Awareness	
Insufficient support and planning in relation to environmental education programs, including insufficient planning regarding the number of specialists necessary in particular environmental science disciplines	
Identified Causes/Barriers	Approved Actions/Activities
Lack of Higher Education planning in Latvia Low interest of stakeholders in planning of educational processes.	<i>The MoE in collaboration with the Ministry of Education and Science (MoES) will jointly prepare an action plan and a set of principles to guide the development and implementation of environmental education programs and projects⁵⁸.</i>
Lack of efficient national development planning in Latvia.	<i>The MoE will define the public procurement for the preparation of professionals in the field of environment protection. The activity will be included in the work plan of the MoE for 2006.</i>
Limited resources for the development of education in Latvia.	
Lack of homogenous education system.	The professional standards for the environmental sciences will be developed and are submitted to the Environmental Science and Education Council ⁵⁹ . (How will they be developed? Who will take the lead?)
Lack of understanding of planning importance.	The necessary funding for preparation and realization of environmental programs is included in National Development Plan for the programming period of years 2007 – 2013.
Limited financial and human resources to ensure education.	
Contradictions between the necessities to develop certain branches of science and education.	
Insufficient remuneration of employees working in environmental protection.	The MoE will promote that study courses devoted to sustainable development will be elaborated and included in all higher education programmes (including studies of law, military etc.). The issue will be addressed via NSDC and Science Council.
Weak cooperation between ME, MoE universities and potential employers.	

⁵⁸ Action is included in the UNDP project proposal “Developing Capacities in Education and Research for Strengthening Global Environmental Management in Latvia”; project is in final approval (15.04.2005.).

⁵⁹ Established in 1st of June, 2004 by the MoE and consists of representatives of Latvian Academy of Sciences, main universities (University of Latvia, Latvian University of Agriculture, et.al.), the MoE and the Ministry of Education and Sciences.

Priority Needs/Constraints: Environmental Education and Public Awareness	
Insufficient support and planning in relation to environmental education programs, including insufficient planning regarding the number of specialists necessary in particular environmental science disciplines	
Identified Causes/Barriers	Approved Actions/Activities
<p>Lack of standards for environmental professions.</p> <p>Contradictions between the necessities to develop certain branches of science and education.</p>	

Priority Needs/Constraints: Environmental Education and Public Awareness	
<i>Insufficient and ineffective environmental education and information campaigns for promotion of green principles in Latvia</i>	
Identified Causes/Barriers	Approved Actions/Activities
<p>Lack of environmental education system in Latvia</p> <p>Methodology for training and environmental information is incomplete</p> <p>Insufficient awareness of society about environmental and sustainable development problems</p> <p>Insufficient cooperation and coordination of activities between environmental and health care institutions</p>	<p>The Ministry of Health will develop the “National Environmental Health Program” for next time period⁶⁰.</p> <p>Related actions/recommendations are provided in previous sections.</p>

⁶⁰ It is planned to develop this program till the end of 2005, involving members of relevant ministries (int. al., the MoE) and agencies; planned time period is 4-5 years.

Priority Needs/Constraints: Environmental Education and Public Awareness	
<i>Lack of textbooks and teaching aids on Latvia's environment that would also incorporate the requirements of global environmental initiatives</i>	
Identified Causes/Barriers	Approved Actions/Activities
<p>Insufficient funding for elaboration of quality teaching aids.</p> <p>Laboratories and equipment are below desired quality.</p> <p>Insufficient researches to serve as the basis for development of teaching aids.</p> <p>Insufficient understanding of the significance of global environmental initiatives.</p> <p>Insufficient use of modern IT technologies in development of teaching aids.</p> <p>Insufficient understanding of the importance of environmental education.</p> <p>Market of teaching materials is limited.</p> <p>Unreasonably high costs for elaboration of teaching aids.</p>	<p>The MoE and the MoES will launch an initiative to develop or adopt curricular materials focused on the global environment initiatives (based in appropriate IT technologies) and awareness-raising materials on the global environment, targeted on specific stakeholder groups such as teachers, representatives of the mass media, local government officials. The MoE will address the issue via Environmental Education and Science Council⁶¹.</p>

⁶¹ Action is included in the UNDP project proposal "Developing Capacities in Education and Research for Strengthening Global Environmental Management in Latvia"; project is in final approval (15.04.2005.).

Priority Needs/Constraints: Environmental Education and Public Awareness	
<i>Lack of National Environmental Education Strategy that would include best practices</i>	
<i>Identified Causes/Barriers</i>	<i>Recommended Actions/Activities</i>
<p>Lack of strategic planning and development planning in Latvia.</p> <p>Insufficient public awareness on environmental protection, education, sustainable development and their importance.</p> <p>Lack of Higher Education Strategy in Latvia.</p> <p>Incomplete education classification system.</p> <p>Indefinite position of environmental education in Latvia's educational structure.</p> <p>Weak cooperation between stakeholders involved in education process and their social partners.</p> <p>Low interest of stakeholders involved in development of environmental education strategy.</p> <p>Lack of information about the best practices.</p>	<p><i>The MoE in collaboration with the Ministry of Education and Science will develop a comprehensive National Environmental Education Strategy that addresses the full spectrum of public education, awareness-raising, and professional development issues:</i></p> <p><i>To improve the methods of information spreading;</i></p> <p><i>To take advantage of existing environmental information sources and to encourage the development of new centres of information;</i></p> <p><i>To promote more effective information activities of society about the sustainable development, global environment protection, its development and implementation;</i></p> <p><i>To cover the questions that addresses curricular content, the scope and focus of environmentally related academic specializations, and the existing education classification system⁶².</i></p> <p>The State Chancellery Policy Coordination Department will make recommendations on how current development planning processes can be rationalized and made more consistent with Latvia's national sustainable development agenda. (Make recommendations to who? In what form?)</p>

⁶² Action is included in the UNDP project proposal "Developing Capacities in Education and Research for Strengthening Global Environmental Management in Latvia"; project is in final approval (15.04.2005).

ANNEXES

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