

# Emergency Preparedness of Estonia

## Summary

**What is the aim of the audit?** The aim of the audit was to assess Estonia's preparedness for emergencies resulting from bird flu, an influenza pandemic, extensive marine pollution and transportation accidents involving dangerous chemicals and the functioning of the emergency preparedness system. The National Audit Office is hoping to contribute to improving the preparedness through recommendations for solving the problems.

**What is emergency preparedness?** A state is ready for an emergency if

- it has been identified where, why and when an emergency may occur;
- a justified assessment of the likelihood and the extent of the consequences of an emergency has been made;
- all risks requiring management have been reduced;
- a contingency plan which specifies a clear chain of management and determines the roles of all parties involved and all resources has been made for responding to an emergency (in the case of a threat/danger);
- preconditions for implementing the plan have been created by ensuring the existence/availability of the required resources and conducting training events and exercises.

It is not enough for ensuring emergency preparedness if there is a reasonable and feasible contingency plan for just one field, e.g. influenza pandemic. In general, various tasks have to be fulfilled in order to resolve emergencies. For example in order to prevent an influenza pandemic or its spread, a quarantine has to be declared, control over whether the restrictions are followed has to be ensured as well as overall law and order, etc. In addition, water and power supply, waste management, food supply, rescue services, etc., have to be ensured during an influenza pandemic although some employees are severely ill. The National Audit Office assessed the emergency preparedness in general not by specific institutions. Preparedness for the four abovementioned emergencies was assessed according to the following diagram (See also Annex 2):

**Emergency preparedness = Emergency prevention + Preparations for an emergency**  
(risk assessment and risk reduction measures) (A contingency plan and resources for fulfilling the plan)

**Why is emergency preparedness important?** **If emergency preparedness is inadequate, emergencies cannot be resolved efficiently enough to keep the damage to people, property and the environment as little as possible.**

The state has an obligation to resolve emergencies quickly and efficiently. In the case of emergencies resulting from bird flu, an influenza pandemic, extensive marine pollution and transportation accidents involving dangerous chemicals Estonia has to fulfil its international commitments as well. For example, pursuant to the International Health Regulations (IHR), Estonia has to inform other countries of any disease-related dangers (including bioterrorism) if these may endanger the health of citizens of other states. Estonia has to diagnose the cause of the disease outbreak as well. The Central Virology Laboratory constantly informs the Health Protection Inspectorate of epidemiologically important pathogens and the HPI informs the Ministry of Social Affairs, the Ministry of Foreign Affairs, the WHO and the European Commission.

**What were the conclusions of the audit?**

**In spite of the serious and recommendable efforts of the ministries, Estonia is not ready for emergencies resulting from bird flu, an influenza pandemic, extensive marine pollution or transportation accidents involving dangerous chemicals because the protection of people, property and the environment has not been ensured. Emergency preparedness requires considerably more attention and resources and emergency preparedness arrangements have to be changed to ensure that one ministry is responsible for one certain emergency (or the Ministry of the Interior is responsible for all emergencies) and that ministry has to have the required powers for fulfilling the obligations.**

The following table summarises the assessment on the emergency preparedness depending on the audit criteria.

Criterion	Infectious animal disease	Pandemic	Marine pollution	Transportation accident
Risk assessment	+	+	+/-	+/-
Contingency plan	+	+/-	+/-	-
Implementation of the plan	+/-	+/-	+/-	-

Preparedness for those emergencies in the case of which the responsibilities as regards the tasks necessary for achieving emergency preparedness have been specified in the respective special legal acts and in the case of which the preparedness plans have been prepared in compliance with the requirements of the European Commission (e.g. bird flu and influenza pandemic) is much better.

The main problem with other emergencies, i.e. emergencies resulting from extensive marine pollution and transportation accidents involving dangerous chemicals, is that there is no head ministry which is responsible for emergency preparedness and emergency response activities. If responsibility is shared between several ministries and none of these has the obligation to manage the process, preparing a comprehensive contingency plan, division of roles and common procurement of resources are difficult.

As the Emergency Preparedness Act can be interpreted in a way that the Ministry of the Interior is the general manager of emergency preparedness, other ministries do not consider themselves responsible. During the audit and in order to solve the problems, the Ministry of the Interior has drawn up a concept for changing the legal bases for crisis management and formed an interministerial task force which should prepare the draft for the Emergency Preparedness Act Amendment Act and its derivative acts.

The adequate preparedness for bird flu can be achieved with rather little effort and time. The work done to improve the preparedness for an influenza pandemic deserves credit but it takes more effort and time to achieve the adequate level of preparedness.

In spite of the fact that a national oil spill contingency plan was prepared during the audit period, we regret to say that the preparedness for extensive marine pollution was not at the required level at the end of the audit. The preparedness for an emergency resulting from a transportation accident

involving dangerous chemicals is inadequate. During the audit, the Ministry of the Interior drew up a long-term investment plan for obtaining absent but required resources.

**How to characterise the arrangements for emergency prevention and preparations for an emergency?**

**The emergency preparedness arrangements are inefficient because they do not support preparing a quality risk assessment or a contingency plan allowing for efficient resolution of an emergency. The creation of the prerequisites necessary for fulfilling the plan has not been arranged purposefully either.**

Both emergency prevention and fast and efficient emergency response require cooperation of many ministries and persons. The responsibility for emergency prevention and emergency preparedness has been divided between various ministries and institutions in their area of government; however, no head ministry has been appointed which would be the general manager of emergency response activities and have the respective powers. In principle, the Ministry of the Interior can be appointed head ministry for emergencies but this has not been done either. The powers involved in “management” and “coordination” have not been specified in legal acts.

The investments necessary for emergency prevention and emergency resolution have not always been identified or prioritised which results in non-optimal public financing for emergency preparedness.

In addition to the above, the following circumstances make **the emergency prevention arrangements** inefficient:

- The implemented risk reduction measures have not been taken into account in assessing the likelihood of an emergency and the extent of its consequences;
- Decisions on the need to handle risks are not made systematically. There is no general overview of all risk reduction measures implemented, their efficacy and costs from one side and the measures that need to be implemented and their approximate costs from the other side.

In addition to the above, the following circumstances make **the arrangements regarding preparations for an emergency** inefficient:

- The existence and availability of resources necessary for emergency resolution have not been ensured. There is no general overview of the resources which are necessary, existent and absent; the acquisition of absent but required resources, e.g. personal protective equipment, has not been arranged purposefully;
- The training events and exercises organised for verifying the functioning of contingency plans and achieving the required preparedness of people who will execute the plan do not include all parties involved in emergency resolution.

**How prepared is the state for an emergency resulting from bird flu?**

**Bird flu prevention activities are efficient but there are some shortcomings in the emergency preparedness:**

- Emergency response management is ambiguous because the Infectious Animal Disease Control Act and the contingency plan do not indicate that the infectious animal disease control committees operate as crisis management teams;
- Bird flu training events and exercises have not been conducted in all counties due to which all parties are not adequately prepared.

The recommendations of the National Audit Office to the Minister of Agriculture pertain mostly to improving bird flu preparedness by making

additions to the Infectious Animal Disease Control Act and the respective contingency plan and conducting training events and exercises.

**How prepared is the state for an influenza pandemic?**

**Estonia is not prepared for an influenza pandemic.**

In the case of isolated influenza incidents which might become a pandemic a quarantine cannot be declared and other measures preventing a pandemic cannot be taken. The measures necessary for preventing the spread of pandemic influenza can be implemented only if the pandemic has begun. The Ministry of Social Affairs has prepared the draft act necessary for solving this problem but additions are made to it in compliance with the principles of the reviewed International Health Regulations.

The preparedness plan for an influenza pandemic does not cover the responsibilities of the agencies and persons involved in the respective response activities. The plan which includes a clear division of roles and management arrangements covers only the field of health but activities which are carried out only in this field are not enough for resolving an influenza pandemic. In order to ensure preparedness for an influenza pandemic, an interdisciplinary preparedness plan has to be drawn up and the activities of the parties involved have to be specified. Movement restrictions have to be declared and implemented, health of the involved persons has to be protected, transport, food supply, etc., have to be ensured. The audit also revealed the fact that the persons who will perform operationally and strategically important official duties have not been ensured with adequate supply of personal protective equipment or flu medications and immediate procurement of these has not been ensured if this should become necessary. The preliminary preconditions for a contingency plan in the field of health have been created by training and exercise arrangements and the existence and availability of the required resources. Nevertheless, training events and exercises on an influenza pandemic have not been conducted in all counties due to which the preparedness of all parties is not at an adequate level.

It must be recommended that the Ministries of Social Affairs and the Interior have cooperated and considerably increased their preparedness for an influenza pandemic during the audit.

The recommendations of the National Audit Office to the Minister of Social Affairs pertain mostly to improving the preparedness for an influenza pandemic by making additions to the Communicable Diseases Prevention and Control Act and the respective preparedness plan as well as acquiring absent but required supplies.

**How prepared is the state for an emergency resulting from extensive marine pollution?**

**The preparedness of the state for an extensive marine pollution is inadequate.**

The Ministry of the Interior has not been given overall responsibility for the preparedness for and response to extensive marine pollution in the oil spill contingency plan due to which we cannot be sure that the ministry will actually act as the head ministry.

**Prevention** of extensive marine pollution is inefficient because no comprehensive risk assessment has been carried out in order to plan the preparedness for extensive marine pollution and the monitoring for detecting extensive marine pollution is inadequate as well.

The **preparations** for an extensive marine pollution is inadequate primarily because of the lack of resources. The optimal need for resources has been

determined in the minimum standards in the recommendations of the HELCOM. There is no systematic overview of the resources which are existent and absent and the arrangements for acquiring the absent but required resources are not purposeful.

It must be recommended that the Ministry of the Interior has considerably increased their preparedness for extensive marine pollution during the audit. A national oil spill contingency plan was prepared during the audit but unfortunately there still are no preconditions for implementing the plan. Estonia's capabilities to respond to pollution do not comply with the minimum standards of the Helsinki Convention.

**How prepared is the state for an emergency resulting from a transportation accident involving dangerous chemicals?**

The preparedness of the state for an emergency resulting from a transportation accident involving dangerous chemicals is inadequate.

No ministry has been appointed general manager of the prevention and preparedness activities as regards emergencies resulting from transportation accidents involving dangerous chemicals, including extensive air, soil and groundwater pollution. There is no comprehensive contingency plan for an emergency resulting from a transportation accident involving dangerous chemicals which specifies the roles of all parties involved and covers all resources necessary for responding to the emergency. Among other things, evacuation arrangements or the related risk reduction (e.g. protection of unguarded property) have not been considered.

In addition to the above, the following circumstances make the emergency **prevention** arrangements as regards emergencies resulting from transportation accidents involving dangerous chemicals inefficient:

- No comprehensive risk assessment has been conducted in order to plan emergency preparedness and the existing risk assessment does not include the evacuation need analysis;
- All risks requiring management have not been reduced which includes the fact that the monitoring of dangerous chemical transport on Estonian roads and railways is inadequate and the minimum liability insurance premium of economic entities does not cover the possible damage;
- The national arrangements for monitoring dangerous cargo are inefficient because the distribution of responsibilities between the relevant authorities is not clear and the extent of the checks (incl. labelling checks) is inadequate.

In addition to the above, the following circumstances make the **preparations** for an emergency as regards emergencies resulting from transportation accidents involving dangerous chemicals inefficient:

- The existence and availability of the resources required for emergency resolution have not been ensured. There is no general overview of the resources which are necessary, existent and absent; the existing resources are not adequate for emergency resolution;
- There have been not enough training events and exercises to ensure preparedness of all parties involved.

**Opinion of the Minister of the Interior**

In principle, the Minister agreed with the most of the conclusions and recommendations made in the audit. There were some disagreements regarding the head ministry in the case of emergencies resulting from extensive marine pollution and transportation accidents involving dangerous chemicals.

**Opinion of the Minister of Agriculture**

The Minister agreed with the conclusions and recommendations made in the audit and made no comments or additions.

**Opinion of the Minister of Social Affairs**

The Minister agreed with the most of the conclusions and recommendations made in the audit. There were disagreements regarding clarity of the role of the infection control committee and the Ministry of Social Affairs as pertains to procuring the supplies of personal protective equipment and pharmaceuticals for the involved agencies in the case of an influenza pandemic.

**Opinion of the Minister of the Environment**

The Minister agreed with the conclusions and recommendations made in the audit and made no comments or additions.

**Opinion of the Minister of Economic Affairs and Communications**

The Minister agreed with the conclusions and recommendations made in the audit. The clarifying comments and additions have been taken into account in preparing the audit report.

## CONTENTS

<b>SUMMARY .....</b>	<b>1</b>
<b>EMERGENCY PREPAREDNESS ARRANGEMENTS .....</b>	<b>8</b>
<i>The emergency prevention arrangements are inefficient.....</i>	<i>12</i>
<i>The arrangements regarding preparations for an emergency are inefficient. ....</i>	<i>16</i>
<b>PREPAREDNESS OF THE STATE FOR AN EMERGENCY RESULTING FROM AN ANIMAL DISEASE ON THE EXAMPLE OF BIRD FLU.....</b>	<b>19</b>
<i>Bird flu prevention activities are efficient. ....</i>	<i>20</i>
<i>There are some shortcomings in the preparation activities for an emergency     resulting from bird flu:.....</i>	<i>23</i>
<b>PREPAREDNESS OF THE STATE FOR A PANDEMICS ON THE EXAMPLE OF AN INFLUENZA PANDEMIC.....</b>	<b>28</b>
<i>The prevention of an influenza pandemic is inefficient. ....</i>	<i>29</i>
<i>There are several shortcomings in the preparation activities for an influenza     pandemic. ....</i>	<i>32</i>
<b>THE PREPAREDNESS OF THE STATE FOR AN EXTENSIVE MARINE POLLUTION.....</b>	<b>40</b>
<i>The prevention of extensive marine pollution is inefficient. ....</i>	<i>42</i>
<i>There are several shortcomings in the preparations for extensive marine pollution.     .....</i>	<i>44</i>
<b>THE PREPAREDNESS OF THE STATE FOR AN EMERGENCY RESULTING FROM A TRANSPORTATION ACCIDENT INVOLVING DANGEROUS CHEMICALS .....</b>	<b>49</b>
<i>The prevention of an emergency resulting from a transportation accident involving     dangerous chemicals is inadequate. ....</i>	<i>50</i>
<i>The preparations for an emergency resulting from a transportation accident     involving dangerous chemicals are inefficient. ....</i>	<i>55</i>
<b>ANNEX 1. RECOMMENDATIONS .....</b>	<b>60</b>
<b>ANNEX 2. AUDIT OVERVIEW .....</b>	<b>64</b>
<b>ANNEX 3. INTERNATIONAL OBLIGATIONS AS REGARDS EMERGENCY PREPAREDNESS.....</b>	<b>67</b>
<b>ANNEX 4. ABBREVIATIONS.....</b>	<b>68</b>
<b>ANNEX 5. ANALYSED LEGAL ACTS.....</b>	<b>69</b>
<b>ANNEX 6. LIST OF INTERVIEWEES .....</b>	<b>73</b>



## EMERGENCY PREPAREDNESS ARRANGEMENTS

### What is an emergency?

An emergency is an event or a chain of events which endangers national security, the life and health of persons, significantly damages the environment or causes extensive economic damage, and resolution to which requires coordinated action of the Government of the Republic, government agencies and local governments.

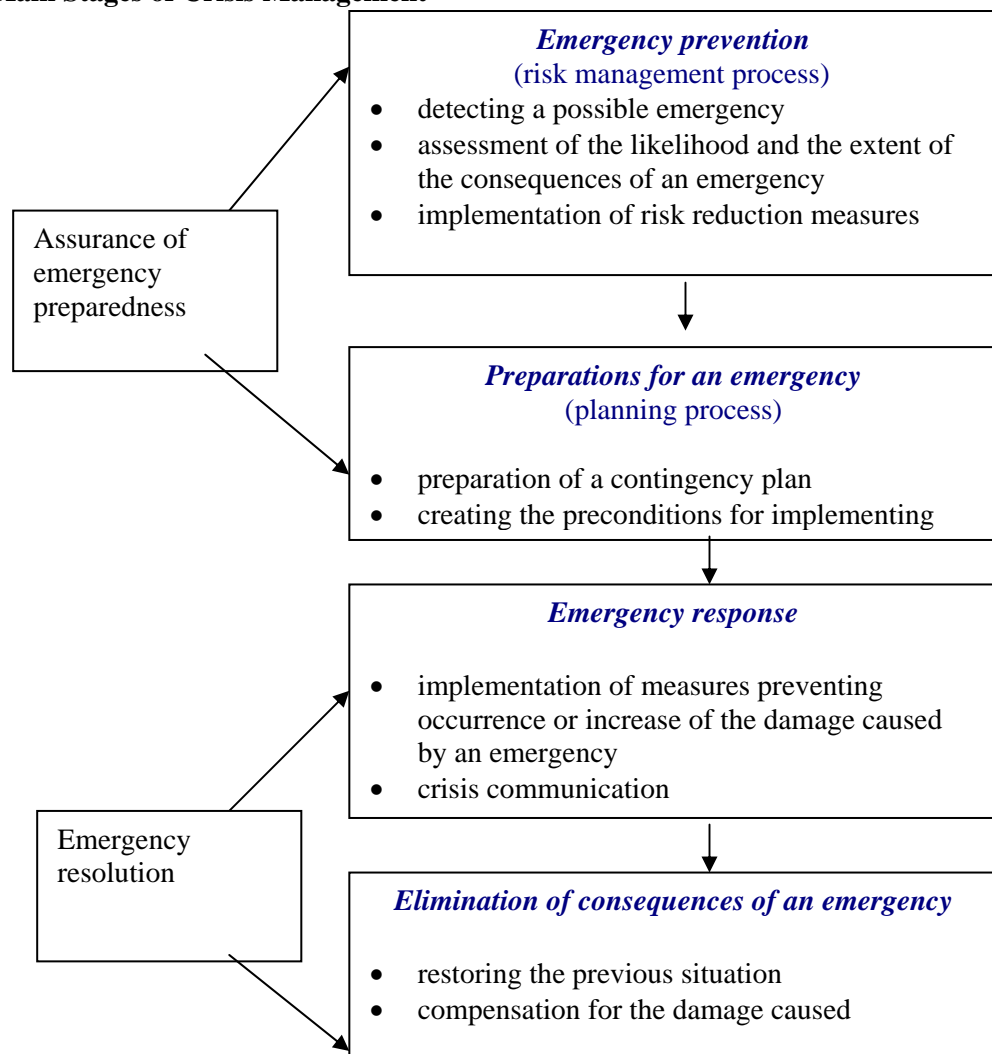
If emergency resolution requires restrictions of people's fundamental rights, including the freedom of movement, an emergency situation has to be declared (e.g. in order to prevent a communicable disease from spreading).

### What is crisis management?

The crisis management system includes two separate concepts – assurance of emergency preparedness and emergency resolution. Assurance of emergency preparedness includes emergency prevention and preparations for an emergency. Emergency resolution includes responding to an emergency and eliminating its consequences (See Figure 1).

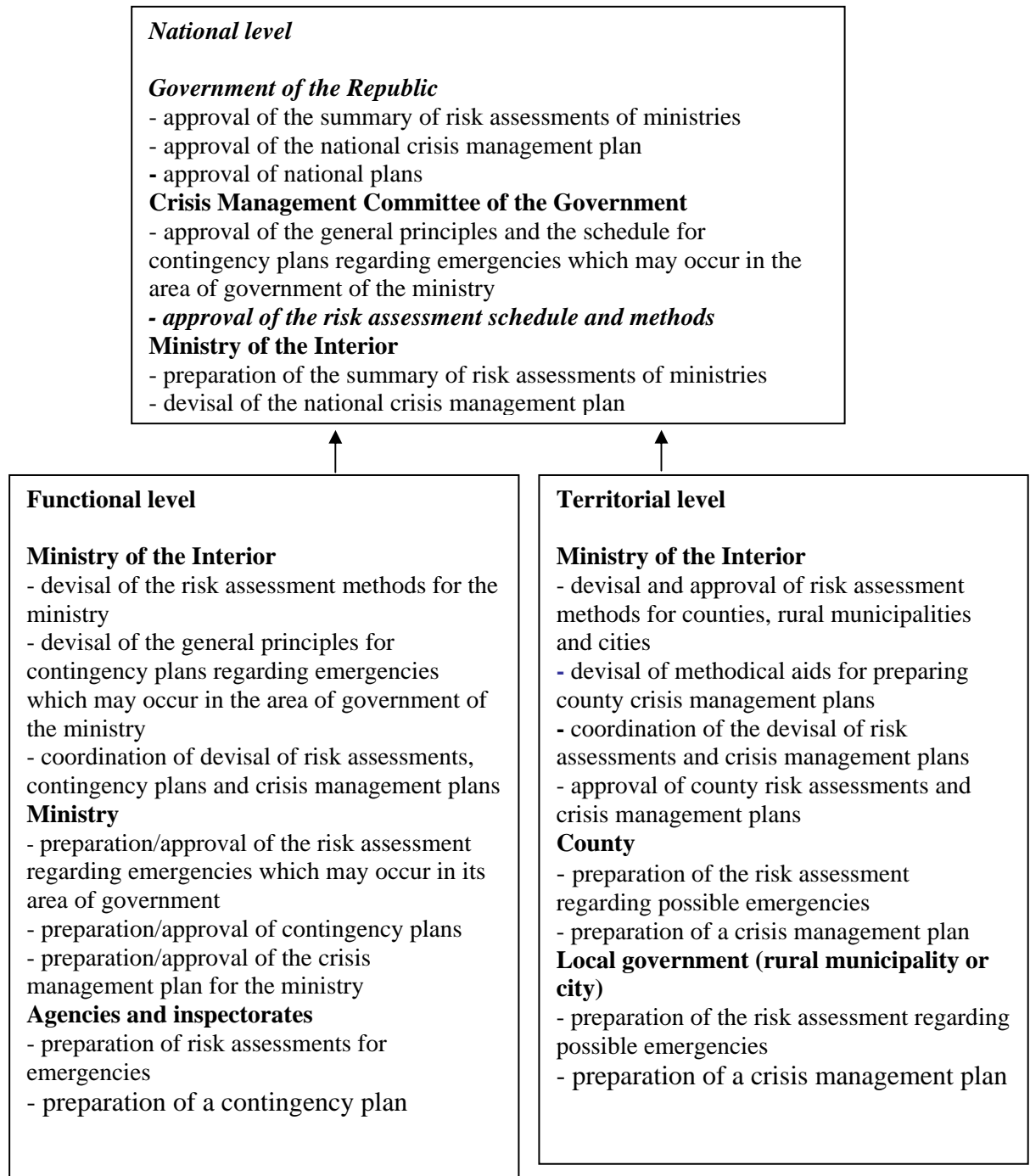
**The national system of crisis management measures** has been specified in the Emergency Preparedness Act (EPA) and the functioning of the whole system is described in the national crisis management plan.

**Figure 1. Main Stages of Crisis Management**



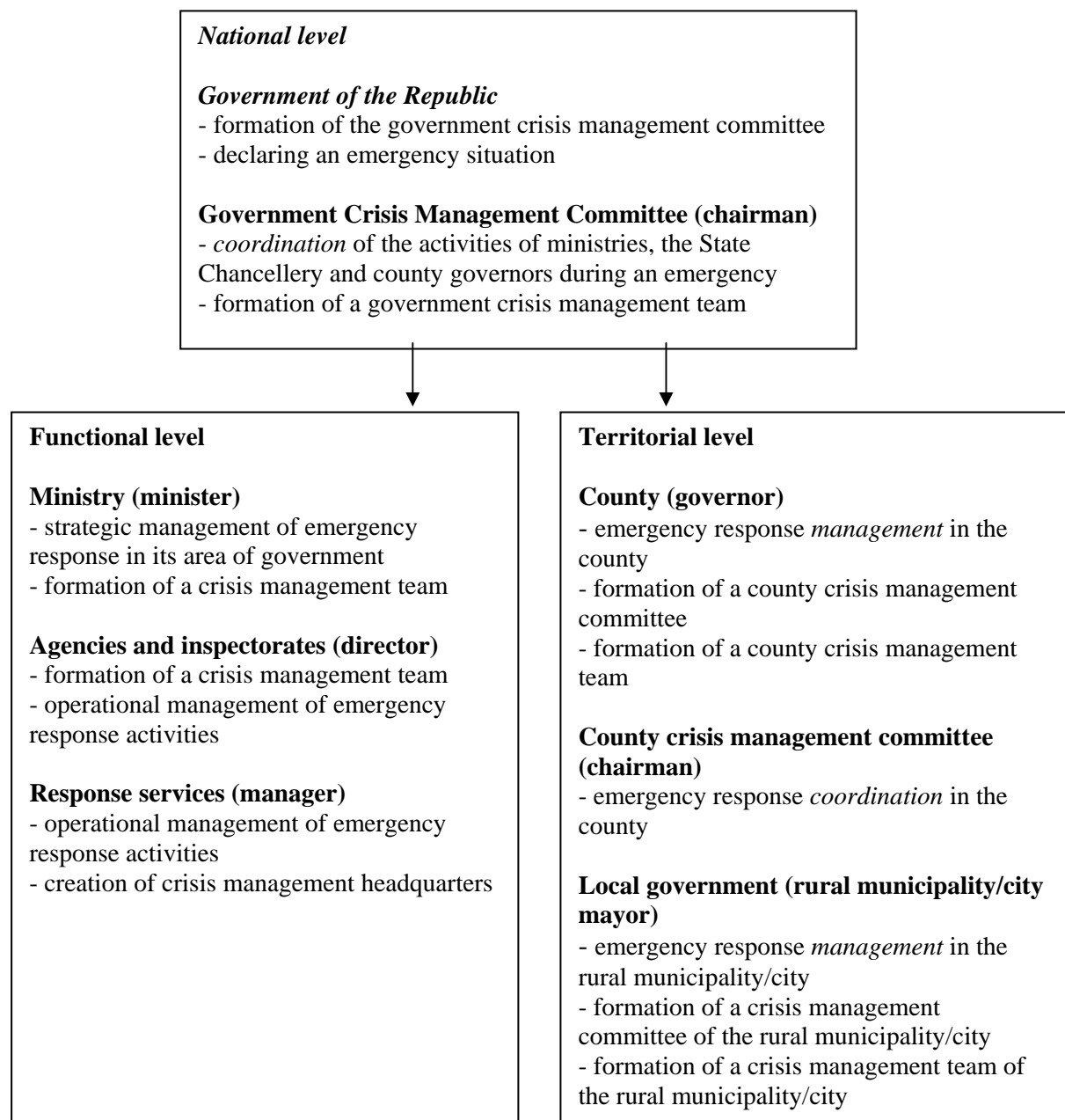
1. Emergency preparedness arrangements do not support comprehensive assessment of the likelihood of an emergency and severity of its consequences, drawing up of a contingency plan and creation of preconditions for implementing it. Various methods are used and the information exchange is not systematic (See Figure 2).

**Figure 2. Assurance of emergency preparedness**



2. The arrangements for emergency preparedness do not specify the links between functional and territorial management because the rights and responsibilities contained in the terms “management” and “coordination” have not been specified (See Figure 3).

**Figure 3. Emergency Response Management**



### Emergency prevention arrangements

Emergency prevention arrangements are efficient if it has been determined why, where and when an emergency may occur, the assessment of the likelihood of the emergency and the extent of its consequences is justified and all risks needing management have been reduced. In order for the process to function, constant monitoring and control at least once a year has to be ensured; information exchange and consultations between agencies take place as required (at least once a year).

**I. Identifying possible emergencies and appointing an entity responsible for these.** A list of possible emergencies should be the output here.

**II. Assessing the likelihood and the extent of the consequences of an emergency.** A risk matrix and a risk description/assessment form are

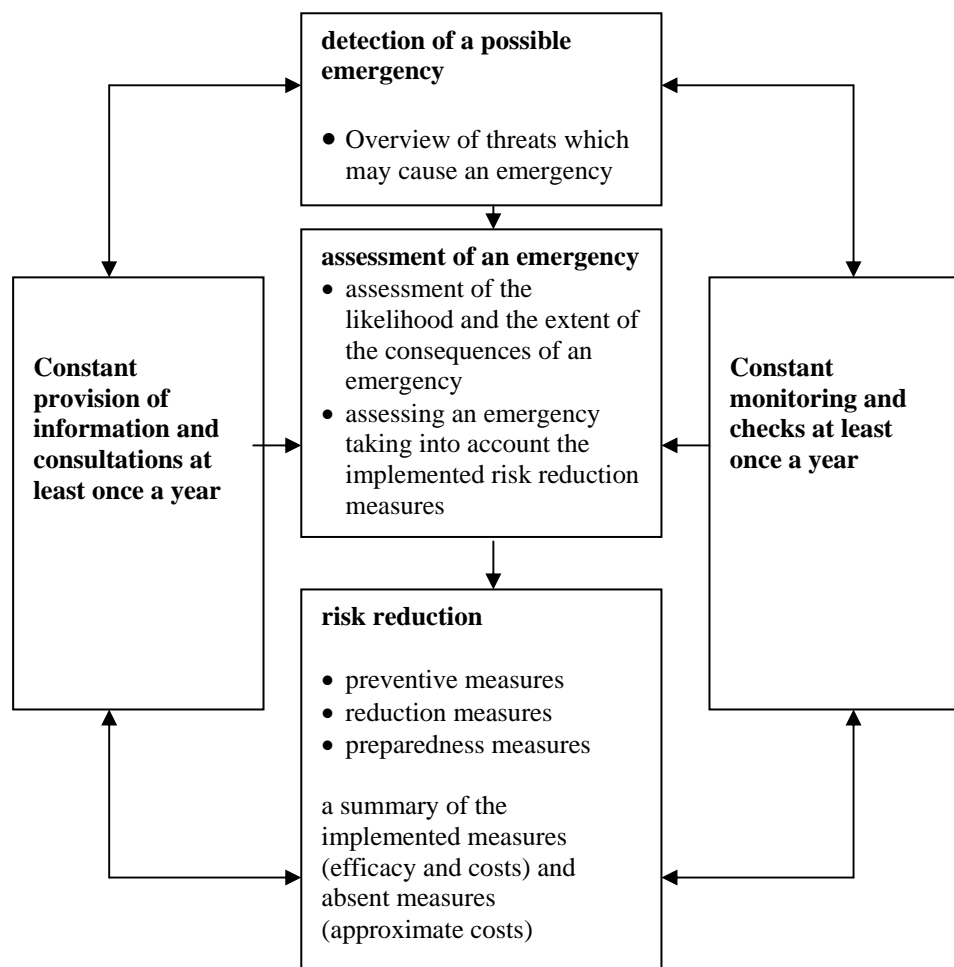
prepared for each emergency (see Figure 4). A summary of risk assessments of the ministries where the emergencies have been prioritised on the basis of the assessments should be the output here. Based on this, priority emergencies are identified and financing from the state budget will be planned for implementing the risk reduction plans and contingency plans.

**III. Risk reduction** – risk management decisions, planning and implementing proper risk reduction measures:

- preventative measures to prevent realisation of the risks;
- reduction measures to reduce the extent of the consequences of emergencies;
- preparedness measures for fast and effective emergency response, e.g. plans, training events/exercises, required resources/operation supplies.

For each emergency a general overview will be prepared which contains all risk reduction measures implemented, their efficacy and costs from one side and the measures that need to be implemented and their approximate costs from the other side. The outcome should be the input for assessing the emergency and the output should be a risk reduction plan for each emergency. The measures necessary for reducing risks will be implemented according to a plan.

**Figure 4. Preparation of a risk description/assessment form**



**Are the  
emergency  
prevention  
arrangements  
efficient?**

***The emergency prevention arrangements are inefficient.***

**At the stage of identification of possible emergencies,** a list of possible emergencies is drawn up but no head ministry which is responsible for emergency preparedness and emergency response is appointed. A head ministry has to have the powers, resources and support from other parties which all are necessary for fulfilling this role.

**At the emergency assessment stage,** the likelihood and the extent of possible consequences of an emergency are analysed but not all implemented risk reduction measures are taken into account in the emergency assessment. A risk matrix and a risk description/assessment form is prepared as a result of this stage but the risk assessment does not provide the required overview of the emergency because it does not cover implemented and planned risk reduction measures (incl. their costs). As nobody has been made responsible for population evacuation arrangements, then no analysis and plan for evacuation needs in the case of emergencies are made. As a result, a summary of risk assessments of the ministries (i.e. a summary of assessment of emergencies) is drawn up each year but the emergencies are not prioritised on the basis of the assessment and financing of preparedness for priority emergencies (a risk reduction plan) is not planned in the state budget.

**At the risk reduction stage,** no systematic risk management decisions are made and proper risk reduction measures are not planned and implemented. As a result of the stage, some risk prevention measures are indicated in the risk description/assessment form but no general overview of all implemented risk reduction measures, their efficacy and costs from one side and measures which need to be implemented and their approximate costs from the other side is given. As a result, implemented risk reduction measures are not taken into account in assessing an emergency and a risk reduction plan is not drawn up for each emergency.

No complete overview is given of emergency preparedness. No periodic analysis of preparedness is carried out to find out the shortcomings in order to constantly increase the level of emergency preparedness of the state.

The National Audit Office based its assessment of the efficiency of the risk management process of emergency preparedness in the opinion of external experts.

**3. The emergency preparedness is inadequate because the respective responsibility has been divided between ministries.** The Emergency Preparedness Act does not specify all the duties of a head ministry in the case of an emergency (as regards both emergency preparedness and emergency response). *As no head ministry or responsibilities have been specified in the case of each emergency, there may be some so-called grey areas where no one acts or is responsible. Agencies interpret their responsibilities in a restrictive way which prevents interministerial cooperation.* In this case, the Ministry of the Interior is expected to solve the dispute. As the EPA calls the Ministry of the Interior head crisis management ministry, which is a misleading term, then such expectations are understood.

**4. As nobody has been made responsible for population evacuation arrangements then no analysis and plan for evacuation needs in the case of emergencies are done.** Pursuant to the Emergency Preparedness Act, county and local government crisis management plans have to specify measures for evacuating and relocating the population but the act does not specify the duties of the ministries as regards evacuation (except assistance to evacuees by the Ministry of Social Affairs). During the auditing, no agency

did consider itself responsible for evacuation arrangements. In addition to the fact that there is no one to organise evacuation, there is no analysis of emergency evacuation needs and no comprehensive evacuation plan which specifies evacuation arrangements (incl. duties of all parties involved), places where to evacuate people and the existence of required conditions in these places, transportation needs, protection of the property of evacuees, etc. The national crisis management plan also specifies that an annex will be drawn up on population evacuation.

**5. The system for forwarding information on emergency preparedness is not purposeful and it does not allow the head ministry to obtain an overview on emergency preparedness in counties.** According to the system, counties will submit their risk assessments and crisis management plans to the Ministry of the Interior. The head ministry cannot get an overview of the emergency preparedness of counties. However, it is important that the head ministry for an emergency know what kind of assessment has been made of a particular emergency in counties and what kind of response measures they have planned, and counties have to know what kind of assessment has been made of the emergency by the head ministry and what response measures it has planned. For example, the Ministry of Agriculture has no overview of the response activities in the case of an emergency resulting from an infectious animal disease which have been specified in county crisis management plans and the Ministry of Social Affairs has no overview of the response activities in the case of a pandemic which have been specified in county crisis management plans.

**6. The state has no idea what the emergencies are preparedness for which needs most attention next year.** Although the Ministry of Internal Affairs prepares a summary of risk assessments of the ministries, which is discussed by the Government Crisis Management Committee and approved by a government order, there is no overview of the funding needs as regards preparedness for certain emergencies.

**7. Recommendations 1 to 7 to the Minister of the Interior as regards making emergency preparedness arrangements more efficient by adding the following principles to the Emergency Preparedness Act (EPA) and other legal acts on crisis management:**

- 1) Depending on an emergency, a head ministry should be appointed and that ministry should be responsible for emergency preparedness and emergency response management. The head ministry has to have the powers, resources and support from the parties involved which all are necessary for fulfilling this role. An alternative would be to appoint the Ministry of the Interior head ministry for all emergencies;

#### **Opinion of the Minister of the Interior**

In principle, the Ministry of the Interior agrees to recommendations 1, 3, 4 and 5 of the National Audit Office. The Ministry of the Interior in cooperation with other ministries has drawn up a document titled “The Concept of Changes in the Legal Bases for Crisis Management” which mentions the need to clarify the division of duties between the ministries in analysing emergencies involving areas of government of several ministries, i.e. which ministry should analyse the likelihood of an emergency and its possible consequences and how to link the analyses of various ministries. The concept also states that one derivative act of the Emergency

Preparedness Act should specify the ministries which are responsible for emergency preparedness and their duties as regards prevention. The concept states among other things that in the case of an emergency which involves areas of government of several ministries it is necessary to appoint a head ministry for preventive actions as regards that specific emergency. The concept also states that there is a need to draw up another derivative act which specifies head ministries for emergency response. Furthermore, it is important that the derivative act specify the role of a head ministry, i.e. that this ministry will be responsible for responding to a particular emergency in the state. The draft of the Emergency Preparedness Act Amendment Act is planned to be submitted to the Riigikogu in the first quarter of 2008 but before that, it has to be approved by the ministries and the Government of the Republic. Consultations with various crisis management experts on the text of the draft act have begun. An interministerial task force is discussing the proposals and suggestions made in the report of the National Audit Office and they try to come up with the best solution possible.

- 2) An entity responsible for population evacuation should be appointed and that entity should carry out an analysis of the need to evacuate in the case of an emergency and draw up the respective evacuation plan which includes evacuation arrangements (duties of all parties involved, including the ministries), places where people would be evacuated and the existence of required conditions in these places, transportation needs, protection of the property of evacuees, etc.;

#### **Opinion of the Minister of the Interior**

In setting an order in the legal system as regards crisis management, evacuation issues require detailed reviewing and recommendations of the National Audit Office are definitely required. However, it is still early to say how exactly this issue should be specified in the legal acts on crisis management. At the moment counties and local governments are responsible for evacuation arrangements, as specified in the Emergency Preparedness Act. Namely, the Act requires that the county and local government crisis management plans have to include a description of evacuation measures. Furthermore, the Rescue Board has prepared evacuation guidelines according to which a rescue manager will issue an evacuation order. However, it is necessary to mention that the decision on the need to evacuate may be issued by some other agency who is managing emergency response activities and who considers it necessary in the specific situation.

- 3) The head ministry should carry out a comprehensive risk assessment, which is necessary for planning emergency preparedness, and a risk description/assessment form which contains a comprehensive overview of all implemented risk reduction measures, their efficacy and costs from one side and measures which need to be implemented and their approximate costs from the other which would allow for their effect to be taken into account in assessing an emergency;

#### **Opinion of the Minister of the Interior**

In principle, the Ministry of the Interior agrees to the recommendation of the National Audit Office.

- 4) The head ministry should link making a risk assessment of an emergency with the development plans of the ministries and the budget so it is



possible to improve planning and implementation of actions necessary for risk reduction;

#### **Opinion of the Minister of the Interior**

In principle, the Ministry of the Interior agrees to the recommendation of the National Audit Office.

- 5) The head ministry should prepare a comprehensive overview of emergency preparedness for which involved ministries and counties will forward information on emergency preparedness (incl. risk assessments, crisis management plans) to the head ministry;

#### **Opinion of the Minister of the Interior**

In principle, the Ministry of the Interior agrees to the recommendation of the National Audit Office.

- 6) Periodic analyses of preparedness should be carried out to find out the shortcomings in order to constantly increase the level of emergency preparedness of the state;

#### **Opinion of the Minister of the Interior**

The Ministry of the Interior agrees to the recommendation and will take it into account in making additions to the Emergency Preparedness Act and other legal acts on crisis management.

- 7) Emergencies should be prioritised each year on the basis of the assessment given in the summary of risk assessments of the ministries and financing for the preparedness for the top priority emergency (i.e. the contingency plan) should be planned in the state budget.

#### **Opinion of the Minister of the Interior**

The Ministry of the Interior agrees to the recommendation of the National Audit Office. In addition, it needs to be stressed that the summary of risk assessments of the ministries is a summary of the results of the risk assessments performed by the ministries and the priorities will be clear on the basis of the assessments made by the ministries. Thus, it is important for the ministries to employ risk assessment as one tool in planning their development and their budget in order to finance activities which are top priority in risk reduction in their area of government.

#### **Arrangements regarding preparations for an emergency**

Arrangements regarding preparations for an emergency are efficient if a comprehensive contingency plan which includes a clear chain of management, defines the roles of all parties involved and covers all resources has been drawn up and preconditions have been created for implementing the plan by ensuring existence/availability of required resources and conducting training events/exercises. In order for the process to function, additions have to be made to the plan as needed (at least once a year) and it must be ensured that the plans are clearly linked and the definitions used are unambiguous.

**I. Preparation of a plan** – drawing up and making additions to a plan which specifies a clear chain of management and determines the roles of all parties involved and all resources. The output should be a contingency plan for each emergency which should contain an overview of who does what, how and when and it should map the required resources and services.



Are the arrangements regarding preparations for an emergency efficient?

**II. Creation of preconditions for implementing the plan** – conducting training events and exercises and ensuring the existence and availability of the required resources (incl. operation supplies of the state). The output should be a schedule of training events/exercises which are necessary to ensure implementation of the plan, a comprehensive overview of the existing and absent but required resources and a plan of investments into the absent resources. Scheduled training events and exercises are conducted for all parties involved in emergency response activities.

*The arrangements regarding preparations for an emergency are inefficient.*

**As a result of the planning stage** no comprehensive contingency plans are prepared for each emergency. The plan should contain an overview of who does what how and when and it should map the required resources and services. The links between the plans of various levels are not clear.

**As a result of the stage of creating preconditions for implementing the plan** the primary resources for implementing the plan are there but no comprehensive overview is prepared of the necessary, existing and absent but required resources. The acquisition of the absent but required resources (e.g. personal protective equipment) is not coordinated with the ministries and other agencies involved. No plan for long-term investments into acquiring absent but required resources is drawn up and there are no implementation arrangements for the plan. Not all parties involved are taken into account in preparing and implementing the schedule of training events and exercises. Based on risk assessment, the list and amounts of the operation supplies of the state, which are necessary for responding to possible emergencies, are being reviewed and its financing from the state budget is being planned (e.g. food/medication/medical equipment supplies).

**8. The Ministry of the Interior has not ensured accuracy of crisis management documents.** The Ministry of the Interior had not made any amendments or additions to the national crisis management plan, which was approved in 2002, although it needed updating, e.g. some of the ministries mentioned in the plan were no more, as well as the state reserve, etc. The Ministry of the Interior made the national crisis management plan comply with the applicable legal acts during the audit. Furthermore, during the audit, the Ministry of the Interior drew up a concept for changing the legal bases for crisis management and formed an interministerial task force which should prepare the draft of the Emergency Preparedness Act Amendment Act and its derivative acts.

**9. Emergency response management (infectious animal disease control committee *versus* crisis management committee) is not unambiguous because the Act and plan do not mention that control committees will function as crisis management committees.** The emergency response management as specified in the EPA (crisis management committee *versus* infectious animal disease control committee) differs from that specified in special acts, e.g. Infectious Animal Disease Control Act (IADCA) and Communicable Diseases Prevention and Control Act. In spring 2006, the Government Crisis Management Committee decided that the control committees formed pursuant to special acts will function as crisis management committees but the agreement has not been entered into the legal acts (EPA, IADCA, CDPKA) or plans. Thus, it is not impossible that there may be some different interpretations of the functioning of overlapping

committees, e.g. crisis management committee versus infectious animal disease control committee.

**10. Recommendations 8 to 11 to the Minister of the Interior as regards making emergency preparedness arrangements more efficient by adding the following principles to the Emergency Preparedness Act (EPA) and other legal acts on crisis management:**

- 8) In managing response activities to emergencies regulated in special acts (Infectious Animal Disease Control Act, Communicable Diseases Prevention and Control Act) the control committees should function as crisis management teams;

**Opinion of the Minister of the Interior**

The Ministry of the Interior agrees to the recommendation and will take it into account in making additions to the Emergency Preparedness Act and other legal acts on crisis management.

- 9) The head ministry should draw up a comprehensive contingency plan which should contain a clear chain of management as regards emergency response, specify the roles of all parties involved and cover all resources necessary for emergency resolution;

**Opinion of the Minister of the Interior**

In principle, the Ministry of the Interior agrees to recommendations 9, 10 and 11 of the National Audit Office. The Ministry of the Interior in cooperation with other ministries has drawn up a document titled “The Concept of Changes in the Legal Bases for Crisis Management” which mentions the need to clarify the division of duties between the ministries in analysing emergencies involving areas of government of several ministries, i.e. which ministry should analyse the likelihood of an emergency and its possible consequences and how to link the analyses of various ministries. The concept also states that one derivative act of the Emergency Preparedness Act should specify the ministries which are responsible for emergency preparedness and their duties as regards prevention. The concept states among other things that in the case of an emergency which involves areas of government of several ministries it is necessary to appoint a head ministry for preventive actions as regards that specific emergency. The concept also states that there is a need to draw up another derivative act which specifies head ministries for emergency response. Furthermore, it is important that the derivative act specify the role of a head ministry, i.e. that this ministry will be responsible for responding to a particular emergency in the state. The draft of the Emergency Preparedness Act Amendment Act is planned to be submitted to the Riigikogu in the first quarter of 2008 but before that, it has to be approved by the ministries and the Government of the Republic. Consultations with various crisis management experts on the text of the draft act have begun. An interministerial task force is discussing the proposals and suggestions made in the report of the National Audit Office and they try to come up with the best solution possible.

- 10) The head ministry should ensure the existence and availability of the resources required for emergency resolution. It should also prepare a comprehensive overview of necessary, existing and absent but required resources, draw up a plan for long-term investments into acquiring the absent resources and organise coordinated procurement of absent resources, e.g. personal protective equipment;

**Opinion of the Minister of the Interior**

In principle, the Ministry of the Interior agrees to the recommendation of the National Audit Office.

- 11) The head ministry should draw up a schedule of training events/exercises on emergency response and organise its implementation in order to ensure that preparedness of all parties involved is at the adequate level.

**Opinion of the Minister of the Interior**

In principle, the Ministry of the Interior agrees to the recommendation of the National Audit Office.

## Preparedness of the state for an emergency resulting from an animal disease on the example of bird flu

**11. An infectious animal disease** is an animal disease caused by biological pathogens which, either directly or through the environment, may be transmitted from one animal to another or from an animal to a human or vice versa. An infectious animal disease is deemed to be especially dangerous if it is caused by a pathogen which is likely to spread rapidly in animal populations, cause widespread outbreaks of the disease and high mortality rates and it may cause significant financial loss, and if the infectious animal disease constitutes a serious threat to human life and health. Government of Republic Regulation “Establishing the List of Especially Dangerous Infectious Animal Diseases” enlists 17 such diseases which include in addition to bird flu also Newcastle disease, foot-and-mouth disease, cattle plague, classical swine fever and swine vesicular disease. The bird flu danger is bird flu outbreaks in our neighbouring countries or elsewhere in Europe.

### What is bird flu?

**Bird flu** is a fast-spreading extremely pathogenic viral disease of birds which has been classified as an especially dangerous infectious animal disease. Bird flu may be transmitted from one bird to another bird or to an animal.

**12.** In earlier years, birds' illness was caused by subtypes H5 and H7 of type A flu but in recent years, the illness is caused by subtype H5N1 of type A flu and it can be transmitted from a bird to a human. Upon an outbreak of the disease, a quarantine has to be declared and sick birds have to be destroyed because there is no cure for birds if they are already sick. Natural carriers of bird flu are wild birds (especially water birds) who may also infect domestic birds. Migratory birds may carry the disease long distances away. During recent years, there have been bird flu outbreaks in many Asian regions as well as Russia, Romania, Croatia, Turkey and Ukraine.

Did you know that according to the WHO, as of 19 February 2007, 274 people have caught the disease directly from birds and 167 of those, i.e. 60 percent, have died.

**13. Avian influenza is a disease caused by the A/H5N1 viral strain which can be transmitted from a bird to a human and it is one form of bird flu.** The likelihood of avian influenza transmitting from a bird to a human is small and the risk groups include primarily poultry farmers. Avian influenza threatens first and foremost birds (more than 200 million birds have been slaughtered in the world in order to stop the disease from spreading). Most of the migratory birds return to Estonia through Holland where bird flu has not been detected. The second important migration route goes over the Balkans, the Danube delta and the Black Sea coast. Last year, avian influenza reached EU Member States (Germany, Austria, Italy, Greece, Bulgaria, Denmark and Sweden). In the beginning of 2007, there were also some outbreaks in the UK and Hungary but avian influenza has never been diagnosed in Estonia, Latvia or Lithuania. However, a new avian influenza outbreak may occur at the time of migration of wild birds in spring 2007.

**14.** In addition to the Emergency preparedness Act (EPA), avian influenza prevention and control has also been regulated in the Infectious Animal Disease Control Act (IADCA) and Minister of Agriculture Regulation “Bird Flu Control Regulations,” which has been enacted on the basis of the IADCA, in the Veterinary Supervision over Trade in, Import and Export of

Animals and Animal Products Act and Minister of Agriculture Regulations “Requirements for Putting Animals into a Prophylactic Quarantine and for Quarantine Centres” and “Veterinary Requirements for Imported Animals and Animal Products,” which have been enacted on the basis of the abovementioned supervision act. Based on the Infectious Animal Disease Control Act, the Veterinary and Food Board has compiled an action plan titled “National Infectious Animal Disease Control Plan 2006” and a contingency plan for an infectious animal disease and an operational guide to bird flu control. The special acts and plans for bird flu preparedness and control have been drawn up in Estonia in compliance with the requirements of the European Commission. So far, Council Directive 2005/94/EC on bird flu control has not yet been completely transposed but this has to be done by July 2007 at the latest.

**15.** The National Audit Office based its assessment of the efficiency of the risk management process regarding bird flu preparedness in the opinion of external experts.

Emergency preparedness = emergency prevention + preparations for an emergency

**Are bird flu prevention activities efficient?**

*Bird flu prevention activities are efficient.*

It has been determined why, where and when the emergency may occur, an assessment of the likelihood of the emergency and extent of its consequences is justified and all risks needing management have been reduced.

**16.** The head ministry for an emergency resulting from an infectious animal disease is the Ministry of Agriculture (pursuant to the EPA and IADCA) which is responsible for emergency preparedness and emergency response.

**17. The VFB added the ornithologists’ risk assessment and an overview of bird farming companies and bird farmers to its infectious animal disease risk assessment.** The ornithologists’ risk assessment, which was completed in March 2006, identified the likely times and places for bird flu outbreaks based on the places where migratory birds rest as well as the places where domestic birds are farmed. The overview of bird farming companies and bird farmers in Estonia contains data of bird census (by bird species and counties) and an electronic map of the farms and small farmers of birds. 2.5 million domestic birds and 14,500 bird farming companies/bird farmers of Estonia were mapped. The ornithologists’ risk assessment identified the risks depending of the resting places of migratory birds by bird types and regions. In total, Estonia has 33 risk areas and one likely risk area (Narva Reservoir) during spring migration. More than 10,000 birds of risk species stop in these regions.



Photo 1. A goose that has been inoculated against bird flu in Russia on 21 February 2007. Reuters/Scanpix



**18. The likelihood of a bird flu breakout is high and the extent of its consequences is very serious.** During the discussion on the summary of risk assessments of the ministries in February 2006, the Government Crisis Management Committee considered the likelihood of a bird flu outbreak to be high because such outbreaks had become more frequent in Europe. The consequences of bird flu are very serious in the opinion of both the Ministry of Agriculture and the Government Crisis Management Committee. The National Audit Office considers these assessments to be correct. However, it must be mentioned that the information on which the overall assessment was based is scattered in different documents and it does not make it easy to take the implemented preventive measures into account and to plan prevention and control measures. The Ministry of Agriculture has drawn up an infectious animal disease risk assessment in compliance with the methodology of the Ministry of the Interior. But the part of the methodology on risk reduction measures is too general. For example, the infectious animal disease risk description/assessment form<sup>1</sup> does not contain any implemented preparedness measures (including their costs) and therefore, their effects cannot be taken into account in assessing the emergency. However, the infectious animal disease control programme includes a list and volume of prevention and control by infectious animal diseases for each year. The prevention and control measures will be implemented by local veterinary centres. Supervision over implementation of the infectious animal disease control programme is the task of veterinarians.



Photo 2. Preparations for burying sick hens in India on 20 February 2006. AP/Scanpix

---

<sup>1</sup> A risk description/assessment form is drawn up for each emergency and this form indicates the likelihood of the emergency (1 to 5), the extent of its consequences (A to E), the risk category determined on the basis of the above and the preventive measures. Infectious animal diseases belong in the risk category of 4D which means that the likelihood for the emergency is high and its consequences are very severe.

Did you know that 1165 and 150 domestic and wild birds (respectively) were tested for bird flu in Estonia in 2006.

**19. The VFB<sup>2</sup> has ensured constant monitoring and prevention of bird flu.** The constant monitoring is carried out by the central office of the VFB as well as its county veterinary centres. The VFB is monitoring bird flu outbreaks all over the world, especially in EU Member States. It also monitors any possible manifestations of bird flu in Estonia. Should there occur any outbreaks of bird flu in our neighbouring countries where migratory birds come to Estonia, restrictions will be imposed on keeping domestic birds free, i.e. domestic birds have to be kept indoors or in a fenced yard. Furthermore, the VFB has an overview of all bird flu prevention measures implemented in EU Member States.

**20. Appropriate preventive and control measures will be implemented in the case of a bird flu threat.** Since 1994, Estonia has been able to maintain its status as a country free from especially dangerous infectious animal diseases due to application of preventive measures. Due to more frequent outbreaks of bird flu in Europe in spring 2006, the Government of the Republic decided on 16 March 2006 to earmark 6 million Estonian kroons from the reserve to cover bird flu prevention and control measures.

**The Ministry of Agriculture** conducted information campaigns on bird flu prevention and control, opened Internet portal [www.linnugriipp.ee](http://www.linnugriipp.ee), information hotline 1676, printed bird flu information brochures (400,000 copies) in Estonian and Russian and provided information in the press.

**The VFB** ordered an additional risk assessment from ornithologists, inspected bird farming companies and informed bird farmers of the obligation to keep domestic birds indoors. The VFB purchased disinfecting equipment and increased the supply of personal protective equipment (1600 sets required) for the VFB officials, veterinarians, rescue officials, police officials and defence troops who may come into direct contact with infectious material.

**The Veterinary and Food Laboratory (VFL)** formed a Molecular Diagnostics Department at the Tartu Lab and started implementing an express methodology.

**21. Recommendation 1 to the Minister of Agriculture as regards improving preparedness for an emergency resulting from an infectious animal disease:**

- 1) A risk description/assessment form should be drawn up and it should contain a general overview of all implemented risk reduction measures, their efficacy and costs from one side and measures which need to be implemented and their approximate costs from the other which would allow for their effect to be taken into account in assessing an emergency.

#### **Opinion of the Minister of Agriculture**

By renewing the risk assessment of emergencies that may occur in the area of government of the Ministry of Agriculture in 2007, the recommendation of the National Audit Office to draw up a risk description/assessment form which contains a general overview of all implemented risk reduction measures, their efficacy and costs and measured which need to be implemented and their approximate costs the effect of which could be taken into account in assessing an emergency will be added to the assessment.

---

<sup>2</sup> The VFB has the leading role in preventing infectious animal diseases, stopping their spread as well as eliminating these; the Director General of the VFB will be the head of the national infectious animal disease control committee.

**Are preparations for an emergency resulting from bird flu efficient?**

***There are some shortcomings in the preparation activities for an emergency resulting from bird flu:***

A contingency plan for an emergency resulting from bird flu has been drawn up and it contains a clear chain of management, specifies the roles of all parties involved and covers all resources. Preconditions for implementing the plan have been created by conducting training events/exercises and ensuring existence/availability of the required resources.

There were some shortcomings in the preparation activities:

- The act and plan do not indicate that the infectious animal disease control committees operate as crisis management teams which makes emergency response management ambiguous (infectious animal disease control committee versus crisis management committee);
- Bird flu training events and exercises have not been conducted in all counties due to which not all parties are adequately prepared;
- The state operation supplies of food have not been completed which means that food supply to the population is not guaranteed in the case of an emergency.

**22. The contingency plan for infectious animal diseases (hereafter “plan”) includes all activities necessary for eliminating bird flu and complies with the requirements of the legal acts and the Animal Disease Regulation of the European Commission<sup>3</sup>.**

The plan is a detailed plan of control measures to be applied upon the outbreak of an especially dangerous infectious animal disease in order to eradicate the disease quickly and efficiently. This will be implemented in the case of all infectious animal diseases. The plan is available at the homepage of the VFB. The plan includes the parts required by the Infectious Animal Disease Control Act:

- the formation of a national infectious animal disease control committee;
- a list of local infectious animal disease control committees;
- detailed information concerning the persons involved in infectious animal disease control, including their qualifications and obligations;
- the possibilities for the local infectious animal disease control committees to contact persons involved in infectious animal disease control;
- the equipment and materials necessary for proper application of measures for infectious animal disease control;
- detailed instructions for action to be taken in the case of suspicion or an outbreak of an infectious animal disease, including methods of disposal of carcasses;
- training programmes with a view to maintaining the practical and administrative skills necessary in infectious animal disease control;
- the laboratories involved in infectious animal disease control and their facilities, measures to maintain the skills of the laboratories, and facilities for the rapid transportation of samples taken for laboratory testing;

---

<sup>3</sup> The EC Animal Disease Regulations are directly applicable legal acts which enlist infectious animal diseases in the case of outbreaks of which contingency planning principles have to be applied and these regulations also include general control agreements of many diseases.



- the quantities of vaccines necessary to control particular infectious animal diseases and the sources of supply of the products;
- the principles for cooperation between various agencies in eliminating an infectious animal disease.

The roles of the agencies involved have also been specified. Supervision over observance of restrictions on the movement of means of transport, animals and people at an outbreak site and in the protection zone and the surveillance zone will be exercised by the Police Board (Personal Protection Service and police prefectures). The Rescue Board will provide the equipment and people for destroying the infectious material and carcasses without endangering the environment. Infectious animal disease control in wildlife populations will take place in cooperation with the Environmental Inspectorate. Any dangers to people resulting from an infectious animal disease will be eliminated in cooperation with the Health Protection Inspectorate. The Road Administration will ensure traffic rearrangements and road blocks in the case of an outbreak.

The annexes to the plan include questionnaires to be filled in the case of a suspected disease, the equipment existing in the counties and the requisite contact data (in an electronic database as well).

The National Audit Office is of the Opinion that the plan includes all activities necessary for eliminating bird flu from the obligation of animal farmers to report the respective cases and implementing movement restrictions to ensuring that these requirements are followed.

**23.** The European Commission has approved the contingency plan for infectious animal diseases and the operational guides for the control of specific infectious animal diseases (foot-and-mouth disease, bird flu, swine plague). The European Commission came to inspect the situation on 7-18 November 2005.<sup>4</sup> According to the Commission, the situation in Estonia meets the requirements specified in the legal acts of the European Community (Directives 92/40/EEC, 92/66/EEC and 92/119/EEC).

- Both labs of the VFL in Tallinn and Tartu have been well equipped and their personnel have good professional skills and they are committed to their work. The quality control systems are functioning. The tests in the VFL are carried out in compliance with the standards of the World Organisation for Animal Health (OIE) and the VFL has been successfully participating in proficiency testing since 2002. The lab has the equipment necessary for identifying H5 and H7 strains of bird flu, they can perform at maximum 250 express tests for bird flu a day and in addition, they can take another 20 samples by using the virus isolation test.
- The equipment kits of local veterinary centres comply with the contingency plan.
- The work of the national and local infectious animal disease control committees has been well organised and the committees have good supplies.
- The VFB has a list and a register of bird farming companies and the county veterinary centres have data on small flocks of domestic birds.
- Awareness of the contingency plan for infectious animal diseases is satisfactory both in the national and local infectious animal disease control committees.

---

<sup>4</sup> Inspected by inspectors of the Food and Veterinary Office of the European Community (FVO).

- The EC considered the creation of preconditions for implementing the contingency plan for infectious animal diseases satisfactory and found that it contains a clear chain of management (they proceeded from the precondition that an emergency resulting from an infectious animal disease would be dealt with in compliance with the Infectious Animal Disease Control Act).

**24. Emergency response management is ambiguous (infectious animal disease control committee versus crisis management committee) because the act or the plan do not indicate that infectious animal disease control committees will act as crisis management teams.** Responding to an emergency resulting from an infectious animal disease as specified in the Infectious Animal Disease Control Act (IADCA) differs from that specified in the EPA. The contingency plan for an infectious animal disease was drawn up on the basis of the IADCA and only during an exercise in 2006 it turned out that an infectious animal disease control committee (IADCA) and a crisis management committee (EPA) have partly the same duties. The Government Crisis Management Committee made a decision as regards the overlapping roles that in responding to an emergency resulting from an infectious animal disease, the infectious animal disease control committees which have been formed in compliance with the IADCA will act as crisis management teams<sup>5</sup> specified in the EPA. As this decision has not been included in the legal acts or the contingency plan for infectious animal diseases, the functioning of the overlapping committees may also be interpreted differently in the future.

**25. The resources necessary for implementing the contingency plan for an infectious animal disease have been determined.** The resources necessary for the Ministry of Agriculture, the VFB and the VFL have been determined in the plan. The use of resources (people and equipment) of other agencies which help the VFB to implement the plan was clarified in 2006.

**26. The most part of the resources planned for implementing the contingency plan for an infectious animal disease are existent and available if required.** The Ministry of Agriculture, the VFB and the VFL have the primary resources (people and equipment). The VFB has ensured that the counties have the required equipment for infectious animal disease control (basic equipment, field equipment and disinfecting equipment). According to the VFB, one moving disinfection unit is yet to be acquired (pollution/hazardous substance removal equipment) but today, there is an agreement with the Rescue Service to use theirs. Cooperation agreements have been concluded on using resources of all parties involved.

**27.** The Ministry of Agriculture and the VFB have appointed certain people and their substitutes who will be responsible for emergency response in the case of an emergency resulting from an infectious animal disease (bird flu). The contact data on the participants in implementing the plan are with the VFB and each local VFB office. The VFB has gathered the data by the agencies involved (incl. environmental services, the Defence Forces, local road administrations, the Health Protection Inspectorate, the Border Guard Administration, the Environmental Inspectorate, representatives of local

---

<sup>5</sup> "Crisis management team" means a permanent team formed in order to coordinate exchange of information, use of resources and cooperation between agencies and to analyse the situation, and the designated staff, organisation of work and training of which enable the team to work twenty-four hours in the case of emergencies.

governments, veterinarians) as well as by counties (employees of veterinary centres, veterinarians, disinfection companies, etc.). The responsibilities regarding procurement of personal protective equipment for representatives of other agencies which will be involved in emergency response activities have not been specified. The VFB obtained personal protective equipment for rescue officials, police officials and defence troops.

**28. Exercises required to ensure implementation of the contingency plan for infectious animal diseases have not been conducted in all counties.**

The VFB conducted a bird flu exercise (Pandora complex exercise) in Lääne and Põlva Counties on 16-17 February 2006. There was a management conflict during the exercise in Lääne County because both the County Governor (as head of the crisis management committee) and the head of the local veterinary centre (as head of the infectious animal disease control committee) wanted to manage the response activities. The Ministry of the Interior stressed in its assessment of the exercise that they lacked cooperation experiences. As infectious animal disease control exercises have not been conducted in all counties, it is not possible to assess whether the contingency plan will function smoothly in the whole state.

**29. The Ministry of Agriculture has not completed the state operation supplies of food.**

The operation supplies of food should be sufficient for 932,000 people for 7 days. The list and amounts of food parcels have been determined based on the study of the Estonian Nutrition Society "Food Required in Crisis and Emergency Situations." The operation supplies of food, i.e. food parcels, will be distributed regionally. The Ministry of Agriculture started to create the operation supplies of food in October 2006 and it has been planned to conclude 50 contracts with companies by the end of 2008. The guide for using the operation supplies is being compiled. Thus, food supply to the population is not yet guaranteed in the case of an emergency because the state operation supplies of food have not been completed.

**30. Recommendations 2 to 4 to the Minister of Agriculture for improving the preparedness for an emergency resulting from an infectious animal disease:**

- 2) The Infectious Animal Disease Control Act and the respective contingency plan should be reviewed so it is clear that infectious animal disease control committees will act as crisis management committees during emergency response;

**Opinion of the Minister of Agriculture**

In order to improve the level of preparedness for an emergency resulting from an infectious animal disease, proposals will be prepared for making changes to the Infectious Animal Disease Control Act and implementation acts so the responsibilities of infectious animal disease control committees and crisis management committees would be clear in managing emergency response activities.

- 3) Bird flu training events and exercises should be conducted in all counties in order to ensure adequate preparedness of all parties involved;

**Opinion of the Minister of Agriculture**

The counties and the Veterinary and Food Board regularly conduct exercises and information days on infectious animal diseases depending on the situation in the state.

- 4) The state operation supplies of food should be completed in order to ensure food supply to the population in the case of an emergency.

**Opinion of the Minister of Agriculture**

In March 2007, the Ministry of Agriculture submitted a proposal to create national operation supplies of food to 83 companies all over Estonia. As a result of this, negotiations are expected to continue with an aim of concluding the respective contracts in order to ensure food supply to the population during crisis and emergency situations.

## Preparedness of the state for a pandemics on the example of an influenza pandemic

### What is an influenza pandemic?

**31. A pandemic is a widespread epidemic which crosses state borders which means that many people are ill and their mortality rate is high.** A danger of an influenza pandemic is evident if such a pandemic is spreading in our neighbouring states or elsewhere in Europe.

A danger of an influenza pandemic is evident if

- a new influenza virus starts spreading,
- it is confirmed that the virus spreads quickly from person to person and
- the new virus is extremely pathogenic.

**32.** Especially A flu viruses have a pandemic potential. The biggest influenza waves in the world have been:

- Spanish flu H1N1 (1918-1919), 25-30% of the population was ill;
- Asian flu H2N2 (1957-1958), 30-80% of the population was ill;
- Hong-Kong flu H3N2 (1968-1969), 15-40% of the population was ill;
- Russian flu H1N1 (1977-1978), 9% of the population was ill.

**33.** A pandemic influenza is aggressive and fast-spreading viral disease which causes many complications and the risk of its outbreaks has increased in connection with H5N1 bird flu virus which started spreading in the end of 2005 and in the beginning of 2006 and which is extremely pathogenic. It is very likely that a new pandemic influenza virus will come into existence on the genetic basis of bird flu and seasonal flu. However, we have no confirmed data that the A/H5N1 strain of bird flu transmits from person to person. As it is not possible to determine when an influenza pandemic might occur or to prevent it, we must be prepared for it in due time.

It has been found that about 25% of the population might fall ill (98% of them need ambulatory and 2% hospital care) and about 0.37% of the population may die within eight weeks in the case of an influenza pandemic (ECDC model).

**34.** In addition to the Emergency Preparedness Act (EPA), prevention and control of an influenza pandemic has been regulated in the Communicable Diseases Prevention and Control Act (CDPCA) and Government of the Republic Regulations "Requirements and Procedure for International Cooperation on Communicable Disease Control and Notification," "Procedure for Forwarding Information on Incidence of Communicable Diseases and its Risk Factors and the List of Data to be Forwarded" and "Procedure and Conditions for Stopping Especially Dangerous Communicable Diseases on Estonian Borders," which have been derived from the CDPCA, and Minister of Social Affairs Regulations "Requirements for Communicable Disease Control" and "Quarantine Requirements and their Surveillance Procedure." The Emergency Situation Act is the basis for establishing restrictions on the movement of people and other measures necessary during an influenza pandemic. In addition, the Health Services Organisation Act and Government of the Republic Regulation "Healthcare Arrangements in Emergency Situations," which has been enacted on the basis of the HSOA, will be followed. The Health Protection Inspectorate (HPI) conducts influenza monitoring and it has prepared a preparedness plan for an influenza pandemic in compliance with the requirements of the European Commission and the WHO. Today, the changes resulting from the amendments to the International Health Regulations approved by the WHO in 2005 and the new directions agreed between 192 states during the WHO

World Health Assembly have not been entered into the CDPCA (the Ministry of Social Affairs has drawn up the draft of the CDPCA Amendment Act).

**35. The European Commission and the World Health Organization support preparations of Estonia for an influenza pandemic.**

The European Union would like all 27 Member States to be ready to respond to an influenza pandemic. Depending on the stages of the pandemic, the WHO will provide help as well: counselling, financial support, 3 million doses of flu medicine (e.g. Tamiflu). Estonia has drawn up the preparedness plan for an influenza pandemic using the WHO and EC methodology which is applicable all over the world. The plan has been sent to the EC and the WHO for reviewing. In the first half of 2007, experts from the European Centre for Disease Prevention and Control (ECDC) in cooperation with the WHO will come to Estonia to assess the preparedness plan for an influenza pandemic.

**36. The National Audit Office based its assessment of the efficacy of the risk management process as regards preparedness for an influenza pandemic in the opinions of external experts.**

Emergency preparedness = emergency prevention + preparations for an emergency

**Is the prevention of an influenza pandemic efficient?**

***The prevention of an influenza pandemic is inefficient.***

It has been determined why, where and when an emergency may occur and the assessment of its likelihood and of the extent of its consequences is justified. However, there is no legal basis for implementing the measures necessary for timely prevention and control of especially dangerous communicable diseases. The prevention of an influenza pandemic has the following shortcomings:

- In Estonia, there is no influenza reference lab which could participate as a full member in the activities of the EU reference lab network and be a laboratory base for the WHO national influenza centre. During the audit, the Health Protection Inspectorate fulfilled the basic requirements for becoming an influenza centre and now they are waiting for approval from the WHO;
- The use of a quarantine measure is impossible in the case of pandemic influenza. Minister of Social Affairs Regulation “Quarantine Requirements and Procedure for Following These” is not enough for establishing a quarantine during an influenza pandemic. Furthermore, there is no legal basis for establishing a quarantine because pandemic influenza is not an especially dangerous communicable disease within the meaning of the Communicable Diseases Prevention and Control Act. The Ministry of Social Affairs has prepared a draft act which should solve the problem but additions are being made to it on the basis of the principles of renewed International Health Regulations (IHR).



Photo 3. The funeral of a young man who died of avian influenza, Turkey, 5 January 2006. Reuters/Scanpix

37. The head ministry for a pandemic is the Ministry of Social Affairs (in compliance with the EPA and the CDPCA) which is responsible for both emergency preparedness and emergency response.

38. At first, the risk assessment of the Ministry of Social Affairs was not based on the forecast numbers of people who would suffer, be injured or fall ill during a pandemic. By today, expert assessments by the Health Protection Inspectorate and the Healthcare Board have been added to that risk assessment on the basis of a mathematical model of an influenza pandemic and the risk assessment has all source data now. Due to the specifics of the healthcare sector, statistical frequency of occurrence of the emergency was not taken into account in conducting the risk assessment.

39. **The likelihood of an influenza pandemic is high and the extent of its consequences might be very severe** – this was the assessment made by the Ministry of Social Affairs and the Government Crisis Management Committee in their risk assessment. The National Audit Office considers these assessments to be correct. However, it must be mentioned that the information on which the assessment was based is in different documents and this does not make it easy to take into account the implemented preventive measures or plan preventive and control measures. The Ministry of Social Affairs has drawn up a risk assessment of an influenza pandemic using the methodology of the Ministry of the Interior. But the part of the methodology on risk reduction measures is too general. For example, the risk description/assessment form of a pandemic<sup>6</sup> does not contain the preventive and control measures implemented or their costs.

According to the estimates of the Ministry of Social Affairs, the number of risk group individuals who perform operationally and strategically important official duties is about 30,170 and the number of people susceptible to pandemic influenza is about 683,000.

40. **A functioning system has been set up for preventing communicable diseases and containing their spread.** The central office of the Health Protection Inspectorate<sup>7</sup> and its four regional services which have departments in the counties carry out constant epidemiological monitoring. The Estonian Sanitary Quarantine Department of the Tallinn Service of the HPI checks whether the sanitary protection requirements established on the basis of the IHR are complied with in the ports and places where trucks which cross the state border stop in Harju County. The Viru, Pärnu and Tartu County Services carry out the surveillance on the territory of other counties.

41. Estonia has participated in the European Influenza Surveillance Scheme since October 2005 when the Health Protection Inspectorate launched a sentinel system (epidemiological and viral monitoring of influenza system) for monitoring influenza pathogens and contracts were concluded for that purpose with family physicians. However, Estonia has no national influenza centre which would monitor influenza in the state and coordinate cooperation with the WHO and the EC, the veterinary bird flu monitoring system, international organisations and neighbouring countries. In 50 years, the WHO has helped to found influenza centres in most countries, including Latvia and Lithuania. A national influenza centre has to comply with the WHO criteria,

<sup>6</sup> A risk description/assessment form is drawn up for each emergency and this form indicates the likelihood of the emergency (1 to 5), the extent of its consequences (A to E), the risk category determined on the basis of the above and the preventive measures. An influenza pandemic belongs in the risk category of 4D which means that the likelihood for the emergency is high and its consequences are very severe.

<sup>7</sup> The HPI has the medical leading role in preventing influenza pandemics, stopping their spread as well as eliminating these; the Director General of the HPI will be the head of the national infection control committee in the case of a pandemic.

participate in the sentinel monitoring system and have an accredited laboratory. The WHO supplies national influenza centres with diagnostic substances. Today, Estonia does not receive any diagnostic substances from the WHO. Estonia has to found an influenza centre and determine its laboratory basis in order to describe the influenza viruses circulating here. In July 2006, the WHO submitted the conditions necessary for founding a national influenza centre and based on the respective request, money was earmarked for that in the supplementary budget. In 2006, the Central Virology Laboratory introduced molecular diagnostic methods which allow for diagnosing viruses which cause seasonal flu (A/H1, A/H3, B flu viruses) and bird flu (A/H5, A/H7). Preparedness for isolating influenza viruses with a pandemic potential is undermined by the lack of a lab of the required infection safety level.

**42. Pandemic influenza is not an especially dangerous communicable disease within the meaning of the Communicable Diseases Prevention and Control Act and because of that there is no legal basis for establishing any restrictions in the case of an influenza pandemic.** As restrictions can be established through a quarantine in the case of especially dangerous communicable diseases, then there is a plan to amend the CDPCA. The CDPCA amendment act will solve the problems if

- especially dangerous communicable diseases are determined on the basis of epidemiological algorithms in compliance with the International Health Regulations (IHR);
- a legal basis for implementing the measures necessary for timely prevention and control of especially dangerous communicable diseases is ensured;
- implementation of control and prevention measures necessary in the case of people who have been in contact with communicable disease is clarified;
- quarantine measures as regards individuals are clarified and activities necessary for that are specified.

The Ministry of Social Affairs has prepared the draft of the CDPCA amendment act and is awaiting approval for it. If the CDPCA is amended, the respective changes have to be made to the Minister of Social Affairs Regulation “Quarantine Requirements and Procedure for Following These” as well.

**43. Recommendations 1 to 3 to the Minister of Social Affairs as regards improving preparedness for a pandemic:**

- 1) The foundation of a national influenza centre should be completed within 2007 and its laboratory basis should be determined (influenza reference lab) in order to make it possible for Estonia to join the WHO network of influenza centres;

#### **Opinion of the Minister of Social Affairs**

Thanks to the supplementary budget for 2006 (4.5 million kroons), the lab of the Health Protection Inspectorate in Kotka Street has been made to comply with the criteria for influenza centres stipulated by the World Health Organization. The Health Protection Inspectorate has fulfilled the basic conditions for becoming an influenza centre and is awaiting final approval from the WHO.



- 2) A risk description/assessment form should be drawn up and it should contain a general overview of all implemented risk reduction measures, their efficacy and costs from one side and measures which need to be implemented and their approximate costs from the other which would allow for their effect to be taken into account in assessing an emergency;

#### **Opinion of the Minister of Social Affairs**

The Risk description/assessment forms have been drawn up in compliance with the risk assessment methodology of the Ministry of the Interior and these are a part of the risk assessment. A risk description/assessment form for an epidemic has been drawn up as a part of the risk assessment of the Ministry of Social Affairs. More specific descriptions of preventive measures and measures which reduce the consequences as well as their costs have been submitted to the Ministry of the Interior to be entered into the summary of risk assessments. According to the methodology applied so far, no separate risk description/assessment forms have been drawn up for various versions of emergencies (an influenza pandemic is just one possible epidemic). Among the proposals regarding the concept of changes in the legal bases for crisis management, the Ministry of the Interior has mentioned that a separate risk reduction plan has to be drawn up in preparing risk assessments. Probably the risk assessment methodology needs to be made clearer in that respect. The Ministry of Social Affairs intends to take the recommendations of the National Audit Office into account when conducting next year's risk assessment.

- 3) The Communicable Disease Prevention and Control Act should be amended to include a new influenza strain with a pandemic potential in the definition of an international health emergency which requires implementation of preventive measures, including restriction of movement if necessary. The respective changes have to be made to the Minister of Social Affairs Regulation "Quarantine Requirements and Procedure for Following These" as well so it is possible to declare a quarantine during an influenza pandemic.

#### **Opinion of the Minister of Social Affairs**

In 2006, the Ministry of Social Affairs prepared the draft Communicable Diseases Prevention and Control Act Amendment Act according to which the list of communicable diseases will be removed from the definition of especially dangerous communicable diseases. According to the draft act, especially dangerous communicable diseases will be determined on the basis of the principles of the International Health Regulations which were renewed in 2005. According to these principles, the term "international health emergency" also includes a new influenza strain with a pandemic potential. The Ministry of Justice has not approved the above draft act and justified this with the fact that the draft act is in conflict with the constitution. As Estonian legal acts, including CDPCA and its implementation acts, require thorough reviewing due to the changes in the IHR which will take effect on 15 June 2007, the draft act has not been processed further. There is a plan to analyse the IHR in 2007 and start processing the draft act again. In implementing the IHR, the Member States can make use of a transition period of two years of the taking effect of the regulations.

**Are preparations for an influenza**

***There are several shortcomings in the preparation activities for an influenza pandemic.***

Readiness for an influenza pandemic requires early informing of people,

## pandemic efficient?

laboratory diagnostics, trained specialists, a contingency plan for an influenza pandemic and conditions for implementing it. The preparedness plan for an influenza pandemic which includes a clear chain of management and determines the roles of all parties involved and all resources has been drawn up but it covers only the health sector. The preliminary preconditions for implementing the contingency plan have been created through training events and exercises and by ensuring the existence and availability of the required resources. The Ministry of Social Affairs in cooperation with the Ministry of the Interior is adding an action plan, which involves agencies of the Ministry of Economic Affairs and Communications, and the part on the functioning of the sectors of vital importance to the preparedness plan for an influenza pandemic and the creation of the requisite conditions for implementing the plan is planned to be completed by 2010.

The preparation activities for an influenza pandemic have the following shortcomings:

- The role of an infection control committee is not clear in the legal act and the plan and it overlaps that of a crisis management committee which makes emergency response management ambiguous;
- The preparedness plan for an influenza pandemic covers only health and is thus inadequate for resolving the emergency. The preparedness plan does not contain an action plan which includes all agencies involved or the part on the functioning of the sectors of vital importance;
- Risk group persons who will perform operationally and strategically important official duties have not enough personal protective equipment or flu medications which makes it impossible for them to perform their duties;
- Training events and exercises regarding an influenza pandemic have not been conducted in all counties due to which not all parties involved have been adequately prepared.

It must be recommended that as a result of cooperation between the Ministries of Social Affairs and the Interior, the preparedness for an influenza pandemic increased significantly during the audit. For example, the Ministry of the Interior organised the Pandora national complex exercise for an influenza pandemic in 2006 and this increased the ability of the state to respond to a dangerous communicable disease.

**44. A survey on the preparedness of EU Member States for an influenza pandemic indicated that the preparedness of Estonia is average among EU Member States (some indicators were above, some below the EU average).** The survey conducted by the London Institute of Tropical Medicine in 2006 indicated that epidemiological monitoring (responsibility of the HPI), preparedness of the healthcare system (Healthcare Board) and communication (Ministry of Social Affairs) are well organised in Estonia. Involvement of various agencies (nothing is said about the functioning of vital infrastructure) and feasibility of the plan had the worst indicators.

**45. In the case of an influenza pandemic, an emergency situation has to be declared in order to declare a quarantine and implement other required measures.** If an emergency situation has been declared, people suffering from the communicable disease can be treated against their will, people suspected of being infected can be isolated against their will and other measures which restrict citizens' rights can be implemented. Compulsory measures, e.g. regarding private hospitals, pharmacies and family physicians, as well as a quarantine, restriction of movement of healthy people, obligation

to work for the state, etc., can be implemented in the healthcare system in compliance with the Emergency Situation Act. The Defence Forces may be used in the emergency area in order to ensure security. In agreement with other states, crossing of state borders may be temporarily restricted or prohibited in order to stop the spread of communicable diseases. The responsibilities after an emergency situation has been declared are unclear because the Ministry of the Interior considers the Ministry of Social Affairs to be the head ministry but the Ministry of Social Affairs considers itself to be managing only the activities in the health sector, not responding to the emergency at the state level.

**46. The preparedness plan for an influenza pandemic specifies who does what how and when in the health sector but cooperation with other agencies involved in emergency response has been left unregulated.**

Based on the exercise on an influenza pandemic on 23 and 24 November 2005, the EU made the following recommendations:

- An interdisciplinary preparedness plan should be drawn up and the activities of the parties involved have to be specified.
- A list of vitally important infrastructure should be drawn up, their protection should be ensured and people who work in vitally important sectors should be identified.
- A definition of a vitally important sector has to be determined.
- Mass vaccination, quarantine and movement restrictions should be regulated.
- The capacity of the Central Virology Laboratory should be increased.

Implementation of these recommendations has begun.

**47. The preparedness plan for an influenza pandemic does not specify the roles of institutions cooperating with the health sector. After several consultations with representatives of key sectors, it was agreed that:**

- the Ministry of Social Affairs will prepare a preliminary version of an action plan which includes all agencies involved (incl. the Police Board, the Rescue Board and the Defence Forces);
- the Ministry of Social Affairs will draw up a schema for operational information exchange which will describe involvement of other agencies in detail and contain requisite contact data;
- all ministries and counties will add the part on an influenza pandemic to their plans;
- by 2010, a complete action plan will be completed and preconditions for its implementation will be created.

The Ministry of Social Affairs is planning to submit the improved plan to the government for approval. However, the plan does not become automatically a plan on the preparedness of all agencies after it is named a national plan but the head ministry has to ensure that a national action plan is prepared and preconditions for its implementation are created.

**48. The role of an infection control committee is not clear in the legal act and plan and it overlaps that of a crisis management committee.**

The Emergency Preparedness Act (EPA) provides general bases for the regulation and the CDPCA is an addition to the EPA and the CDPCA as a special legal act overrides the EPA. Pursuant to the CDPCA it is possible to form an infection control committee for eliminating infection risks in the outbreak site and for managing stopping of the spread of the communicable disease if there is reason to suspect that somebody has an especially dangerous

According to the estimate of the Healthcare Board, there are about 14,000 healthcare specialists who work and about 1000 healthcare specialists who have retired.

communicable disease or if it has been already diagnosed. It turned out during the exercise in 2006 that the roles of the infection control committee and the crisis management committee overlapped partly. The Government Crisis Management Committee made a decision as regards the overlapping roles that the infection control committees which have been formed in compliance with special legal acts (CDPCA and IADCA) will act as crisis management teams. As this decision has not yet been included in the legal acts or the preparedness plan for an influenza pandemic, the functioning of the overlapping committees may also be interpreted differently in the future.

**49. The resources necessary for implementing the preparedness plan for an influenza pandemic have been specified only partly.**

- The resources necessary for the Ministry of Social Affairs, the HB, the HPI and the CVL have been determined in the plan.
- The resources necessary for the parties to be involved have been specified only partly.
- There is no overview of the resources necessary for the functioning of vital sectors.
- There is no overview of the resources necessary for transporting, storing and burying people who have died of an especially dangerous communicable disease.

**50. Not all resources necessary for implementing the preparedness plan for an influenza pandemic are there.**

- **The Health Protection Inspectorate** has identified the human and material resources necessary for the preparedness, formed teams for epidemiological control of communicable diseases and established an information exchange procedure for a crisis situation. **The Healthcare Board** has determined the crisis capacity of the ambulance service and hospitals. The HB determined the duties of hospitals as regards crisis management during preparations for an influenza pandemic and coordinated the amount of hospital beds and intensive care resources. The contact data of a chain of command – ambulance service, hospitals, alarm centres (names, cell phone numbers of contact persons) – have been gathered. The HB has created a register of healthcare professionals (on the basis of the data for 2002-2005) and the HB has an overview of all physicians specialising in communicable diseases, their work experience and contact data. In 2006, an assessment of the primary training needs of healthcare professionals was conducted and the healthcare sector received additional personal protective equipment for 1 million Estonian kroons.
- **The Central Virology Laboratory** has identified maximum preparedness and maximum capacity which is 100 tests a day. The employees' readiness to act and the supply of diagnostic substances has been indicated. The problem is that the lab uses diagnostic substances which have been purchased from the Russian Federation because these are several times cheaper than the reliable Western diagnostic substances (the HPI has a limited budget). The expert of the WHO doubted the trustworthiness of Russian diagnostic substances.

The plan for the preparedness for an influenza pandemic specifies the resources which the Ministry of Social Affairs, the HB, the HPI and the CVL do not have yet and 25.5 million and 4.5 million kroons were given to the HB and HPI, respectively, from the supplementary budget for 2006 in order for them to acquire health resources.

**51. The following disputed issues hinder implementation of the preparedness plan for an influenza pandemic:**

- Who will procure personal protective equipment for rescue workers, police officials and defence forces so they could act during an influenza pandemic?
- Who will ensure guarding of hospitals and vaccination offices during a pandemic? The Ministry of Social Affairs wants to cooperate with the Rescue Board and the Police Board but the Ministry of the Interior recommended involving the Defence Forces and private security companies in ensuring security during an emergency.
- How are state borders closed during a quarantine? The issue has been discussed in the European Union but no decision has been made on that.
- How will be people who have died of an especially dangerous communicable disease transported, stored and buried? In order to bury people who have died of a pandemic local governments have to conclude contracts with funeral companies which must have adequate personal protective equipment, body bags, etc.
- Will healthcare professionals and health protection officials be ensured with health and life insurance like operational personnel (of the Rescue Board and the Police Board). The lack of insurance may cause problems during an emergency (except if an emergency situation has been declared) because the morbidity and mortality of healthcare professionals is forecast to be twice as high as in general.
- What percentage of the population has to be ensured with an influenza vaccine? According to the Ministry of Social Affairs, the vaccine should be available for at least 25% of the population. Preliminary negotiations with the potential producers of the vaccine are under way.

**52. The operation supplies of the state as regards pharmaceuticals and medical equipment procured by the Ministry of Social Affairs do not satisfy actual needs and the warehouses contain fewer supplies than agreed.** The National Audit Office partly checked the warehouse situation of the operation supplies of pharmaceuticals and medical equipment of the Tartu University Clinics on 18 May 2006. The expiry dates of pharmaceuticals were checked as well. It was revealed that the approved and warehoused quantities of pharmaceuticals differ which is caused by various circumstances:

- The pharmaceutical supplies are constantly renewed due to their expiry dates, e.g. morphine;
- Some pharmaceuticals are not manufactured anymore or manufactured in ampoules of different volume (e.g. fentanyl 0.05 mg/ml);
- No decision has been made on the need to acquire more pharmaceuticals, e.g. antitoxin for tetanus, a serum against viper poison, antitoxin for botulism).

The Ministry of Social Affairs is aware that there are less operation supplies in the warehouse than agreed because of renewal of the supplies (old ones have been sold and the new ones have not been bought yet). However, the Ministry of Social Affairs did not identify any shortages during inventory takings in 2004 and 2005.

**53. The operation supplies of pharmaceuticals and medical equipment have not been formed on the basis of risk assessment and there is no overview of which emergencies, how many people and how much time**

**the supplies would cover.** The Ministry of Social Affairs is of the opinion that in order to ensure more concentrated operation supplies of pharmaceuticals and medical equipment, the operation supplies of the state and that of healthcare providers should be treated as one. The Ministry of Social Affairs decided that the operation supplies of the state and healthcare providers will be treated as one since 2008 and the supplies will be formed on the basis of forecasts on the possible number of people who may suffer due to the pandemic. These activities will be organised by the Healthcare Board. In order to minimise expenses contracts will be concluded with companies according to which they have to ensure certain supplies. An expert assessment was commissioned and an operation supplies committee was formed to review the list and quantities of supplies. The Ministry of Social Affairs submitted to the HB an overview of operation supplies of the state and company supplies also have been assessed by now. Thus, the HB has an overview of pharmaceuticals and medical equipment in the operation supplies of the state and healthcare providers. Financing from the state budget has to be ensured depending on the percentages of operation supplies which the state procures itself and which will be ensured by companies on the basis of contracts (according to the Tartu University Clinics, formation, renewal and maintaining of actual operation supplies require up to 10 million kroons). Formation of supplies has to be decided at the state level so that these are sufficient for all kinds of emergencies.

#### **54. The state has to wait for the commissioned influenza**

**pharmaceuticals until the end of 2007.** Influenza drugs are necessary for the risk group (incl. medical personnel). More operation supplies of personal protective equipment and influenza drug called Tamiflu were bought in 2006 due to bird flu risks. Tamiflu will be used in compliance with the decision of the Ministry of Social Affairs. Estonia has not concluded any agreements with other states to use their medical supplies in the case of an emergency. The Scandinavian states have such agreements.

#### **55. Recommendations 4 to 9 to the Minister of Social Affairs as regards improving preparedness for a pandemic:**

- 4) The Communicable Disease Prevention and Control Act and the preparedness plan for an influenza pandemic should be amended so that the role of an infection control committee is clear and it does not overlap that of a crisis management committee;

#### **Opinion of the Minister of Social Affairs**

We are of the opinion that the roles of national and county infection control committees mentioned in Section 25(1) of the CDPCA do not overlap the ones of crisis management committees or crisis management teams mentioned in the Emergency Preparedness Act. The infection control committees mentioned in the CDPCA do not manage crises. Infection control committees are temporary committees of special experts who work to eliminate infection risks at the outbreak sites of especially dangerous communicable diseases and manage stopping the spread of the communicable disease.

- 5) An action plan which covers all agencies involved and the part on the functioning of vitally important sectors should be added to the preparedness plan for an influenza pandemic in cooperation with the

Ministry of the Interior and the ministry of Economic Affairs and Communications;

#### **Opinion of the Minister of Social Affairs**

The Ministry of Social Affairs is developing a general operational plan for responding to emergencies involving biological risks which covers activities and duties of responding agencies in the case of epidemiological control measures (quarantine, mass vaccination). The abovementioned plan will be coordinated with the action plans of the agencies involved. Today, the duties of the responding agencies have been stipulated in various legal acts and operational guides but these have not been gathered into one document.

- 6) The absent but required resources have to be procured (incl. for all agencies and persons involved) in order to ensure implementation of the preparedness plan for an influenza pandemic. Especially, more personal protective equipment and influenza drugs need to be procured in order to ensure that at least the risk group persons performing operationally and strategically important official duties can fulfil their duties during an influenza pandemic;

#### **Opinion of the Minister of Social Affairs**

We are of the opinion that occupational safety of all officials has to be ensured in compliance with the Occupational Health and Safety Act (also during an emergency) unless specified otherwise in special legal acts or legal acts derived of these. The act stipulates employers' obligation to ensure compliance with occupational health and safety requirements in all work-related situations. Furthermore, employers have to supply employees with personal protective equipment, work clothes, cleaning and washing supplies (if the work requires that) and organise training on using personal protective equipment and all that on the expense of the employers themselves. Therefore, the Ministry of Social Affairs does not consider itself as a head ministry in forming the personal protective equipment supplies or pharmaceuticals for the teams of other agencies for an influenza pandemic. The Ministry of Social Affairs is ready to advise other agencies as regards formation of the supplies. In addition to actual operation supplies of the state, also operation supplies of hospitals and wholesale companies are taken into account in estimating the supplies of pharmaceuticals and personal protective equipment.

- 7) Influenza pandemic training events and exercises should be conducted in all counties in order to ensure adequate preparedness of all parties involved;

#### **Opinion of the Minister of Social Affairs**

The Health Protection Inspectorate and the Healthcare Board have organised several regional and local events on influenza pandemic since 2005. Most of these events have been training events in the form of an information day or workshop. Among these, information days for managers of active treatment hospitals, health protection institutions, persons responsible for emergencies and county physicians have taken place and there have been meetings with the representatives of the Association of Estonian Cities. The Ministry of Social Affairs and its subordinate institutions do not have requisite competence and resources to organise crisis management exercises in counties. According to the Emergency Preparedness Act, preparation and conduction of such exercises is the task of the county governor. A positive

example is the influenza pandemic exercise organised for the county crisis management committee on the initiative of Lääne-Viru and Ida-Viru Counties in the end of 2006 and representatives of the Ministry of Social Affairs, the Health Protection Inspectorate and the Healthcare Board took part in it. The Ministry of Social Affairs with its subordinate institutions will be ready to respond to the exercise initiative of other counties and local governments in the future as well.

- 8) The adjustment of the list and quantities of operation supplies of the state as regards pharmaceuticals and medical equipment should be completed on the basis of risk assessment and plans have to be made for their financing from the state budget in order to form the supplies necessary for possible emergencies.

#### **Opinion of the Minister of Social Affairs**

After the first risk assessment was approved in 2004, the Ministry of Social Affairs has gradually made the list of national operation supplies comply with the risk assessment principles: in general, unnecessary pharmaceuticals have been deleted from the list. Today, it may be stated that the list of national operation supplies complies with the risk assessment as it contains pharmaceuticals and equipment for emergencies involving epidemics, poisonings and lots of injured people as well as pharmaceuticals and equipment for intensive care which are necessary in all of the above cases. However, the quantity of pharmaceuticals is left to be desired. By today, we have separate expert assessments of the need for antibiotics and antidotes and the decision of an expert committee on the operation supplies of the state and healthcare providers has set the objective to achieve the required quantities gradually. Spreading the acquisition of supplies is necessary for economical administration of the supplies because it allows these to be sold to hospitals before they expire and to purchase new medications for the money received for these.

- 9) A procedure should be established for reviewing the list and quantities of the medications and medical equipment included in the operation supplies of the state and healthcare providers and if necessary, these should be adjusted at least once a year so the supplies would meet the actual requirements.

#### **Opinion of the Minister of Social Affairs**

The Minister of Social Affairs has issued a directive setting up an expert committee for operation supplies of medications and medical equipment of the state and healthcare providers and the directive specifies the rules of procedure for the committee as well. Making changes and additions to the list and quantities of the operation supplies of the state and healthcare providers is the main and most important task of this committee. According to the rules of procedure, the committee meets when necessary but not less frequently than once a year. Adjustments to the list and quantities of the operation supplies take usually place once a year. Only 2005 was the exception because the adjustment was planned to be made in the end of the year but it was postponed because of an amendment to the legal act which took effect on 1 January 2006 and allowed documents on the supplies to be handled as ordinary documents (these used to be confidential state secrets) and more experts to be involved.



## The preparedness of the state for an extensive marine pollution

### What is extensive marine pollution?

**Marine pollution** within the meaning of this audit report is oil pollution<sup>8</sup> at sea which may reach the shores, it damages the marine environment or coast of the Baltic Sea and causes serious and long-term financial consequences. Extensive marine pollution within the meaning of this audit report is the second and third level oil pollution described in the national oil spill contingency plan.

Did you know that the biggest oil tankers which travel the Baltic Sea can transport about 150,000 tonnes which is comparable to Exxon Valdez and Torrey Canyon which caused big catastrophes.

**56.** 110 million tonnes of oil were transported across the Gulf of Finland in 2004 and full oil tankers made 1700 to 1800 trips in 2005, 977 of these trips were made in Estonian waters. Usually, the tankers travelling in the Gulf of Finland carry 30,000 to 50,000 tonnes. It is forecast that the total volume of the freight will reach 190 million tonnes by 2010.

**57.** Most marine pollution cases are small (under 7 tonnes according to the International Tanker Owner Pollution Federation (ITOPF)). On average, 400 to 700 smaller oil pollution cases are discovered at the Baltic Sea each year. It is estimated that 10,000 tonnes of oil pollute the Baltic Sea each year. In 2006, there were many pollution cases near the western coast of Saaremaa Island and that year saw the Runner 4 pollution as well. More than three thousand water birds were gathered from Nõva Beach but the specialists estimated that their actual numbers might have been dozens of times bigger.

**58.** Scientists have stated that extensive oil pollution is a catastrophe with irreversible consequences for the marine environment of the Baltic Sea countries. Therefore, the International Maritime Organisation (IMO) considers the Baltic Sea to be a Particularly Sensitive Sea Area (PSSA). The Baltic Sea countries have the right to establish additional requirements for oil transit, also as regards the quality of ships and competence of crew members.

**59.** The regulations for the common protection of the Baltic Sea have been agreed in the Convention on the Protection of the Marine Environment of the Baltic Sea Area. One of the main principles of the convention is that the parties all together or individually will take all legal, administrative or other measures necessary for pollution prevention in order to achieve ecological recovery and balance of the Baltic Sea. Estonia became a party to the Helsinki Convention in 1992. The minimum recommendations for pollution control are given in the Helsinki Convention and HELCOM Response Manual. The recommendations proceed from the risk that 10,000 cubic meters of pollutant is discharged into the marine environment. Within 24 hours, this will cover 20 to 30 square kilometres. By becoming a party to the IMO Convention, Estonia has to save human lives in the rescue area of Estonia and be capable of pollution control. Prevention of marine pollution is also regulated by the International Convention for the Prevention of Pollution from the Ships (MARPOL 73/78). Estonia has become a party to the International Oil Pollution Compensation Fund (IOPC) of 1971 and its protocol of 1992.

<sup>8</sup> Oil – a natural oil product in whatever form: oil shale, crude oil, fuel oil, heavy fuel oil, oil processing products, biodiesel, etc.



Photo 4. Tanker Alambra which caused the most serious marine pollution in Estonia in 2000, when it leaked 300 tonnes of crude oil at Muuga Harbour. Küllike Rooväli/Postimees/Scanpix

**60.** In addition to the Emergency Preparedness Act and Government of the Republic Order “Approval of National Crisis Management Plan,” which has been derived from the EPA, assurance of preparedness for and response to extensive marine pollution is also regulated by the Convention on the Protection of the Marine Environment of the Baltic Sea Area Ratification Act and Regulation “Approval of Legal Acts Derived of the Convention on the Protection of the Marine Environment of the Baltic Sea Area,” which has been derived from the Ratification Act, by the Border Guard Act, the Rescue Act, the Water Act, the Ports Act, the Merchant Shipping Code, the Maritime Safety Act and Regulation “The Procedure for Informing about Dangerous Cargo, the List of Data to be Submitted and the Procedure for Submitting Information on Dangerous Cargo to Interested Parties,” which has been derived from the latter. The responsibilities as regards extensive marine pollution which have been divided between various agencies have been clarified in Government of the Republic Regulations “Setting an Order in Marine Pollution Detection and Control Responsibilities,” “Procedure for Search and Rescue Activities, Including Marine Pollution Detection and Control, in the Internal and Territorial Waters and the Exclusive Economic Zone of Estonia as well as on Lake Peipus, Lake Lämmijärv and Lake Pskov” and Government of the Republic Order “Setting Up an Interministerial Committee for Coordinating the Solution of Maritime, Marine Protection and Pollution Control Issues” Furthermore, an action plan ensuring better arrangements for the protection of the marine environment for the years 2005 to 2007, a sea concept of the Border Guard Administration and the National Oil Spill Contingency Plan have been drawn up.

**61.** The National Audit Office based its assessment of the efficiency of the risk management process of extensive marine pollution preparedness in the opinion of external experts.

Emergency preparedness = emergency prevention + preparations for an emergency
---

**Is the prevention of extensive marine pollution efficient?**

***The prevention of extensive marine pollution is inefficient.***

The responsibilities regarding emergency preparedness and emergency response (pursuant to the EPA) have been divided between the Ministry of the Interior (detection and response to marine pollution), the Ministry of Economic Affairs and Communications (transport safety) and the Ministry of the Environment (environmental protection). Some responsibilities have been placed on local governments, port operators and shipping companies as well. In general, general responsibility for emergency preparedness and emergency response as regards marine pollution has been placed on one minister in the HELCOM states. The prevention of marine pollution has the following shortcomings:

- No single ministry has been appointed head ministry in the case of marine pollution due to which nobody is responsible for management as regards marine pollution preparedness and response;
- No comprehensive risk assessment has been prepared for planning preparedness for extensive marine pollution;
- Monitoring is inadequate to ensure early detection of extensive marine pollution.

**62. The likelihood of extensive marine pollution is high and its consequences would be serious** – this assessment is in the Summary of Risk Assessments of Estonian Ministries 2005” which the Ministry of the Interior has prepared and the Government Crisis Management Committee has approved. The National Audit Office considers this assessment to be correct. However, it must be mentioned that the information on which the assessment was based is in different documents and this does not make it easy to take into account the implemented preventive measures or plan preventive and control measures. The Border Guard Administration has drawn up an extensive marine pollution risk assessment in compliance with the methodology of the Ministry of the Interior. But the part of the methodology on risk reduction measures is too general. For example the extensive marine pollution description/assessment form<sup>9</sup> does not contain any preventive measures and their costs.

**63. The quality of the risk assessment is inadequate to plan emergency preparedness at the state level.** The Ministry of the Interior (Border Guard Administration), the Ministry of Economic Affairs and Communications (Maritime Administration) as well as the Ministry of the Environment (Environmental Inspectorate) have drawn up risk assessments of limited scope but there is no comprehensive risk assessment. The risk assessments have many significant shortcomings:

- The risk assessments have been made using old data. For example, according to the HELCOM, the number of shipping accidents at the Baltic Sea has increased by 60 to 70 percent in 2004-2005 as compared to 2002-2003 which have been mentioned in the risk assessment.
- The risk assessment lacks required information. For example, there are no statistics on the weather conditions (ice conditions, wind, temperature, cloudiness, precipitation, etc.) in the Baltic Sea, including the Gulf of Finland, on the ships, cargo and routes (including the respective trends), analysis of the likelihood of ships colliding and running aground, information on areas where marine pollution is the likeliest, overview of

---

<sup>9</sup> A risk description/assessment form is drawn up for each emergency and this form indicates the likelihood of the emergency (1 to 5), the extent of its consequences (A to E), the risk category determined on the basis of the above and the preventive measures. Extensive marine pollution belongs in the risk category of 4C which means that the likelihood of the emergency is high and its consequences are severe.

areas where the environmental damage would be the severest in the case of marine pollution.

- The risk assessment contains errors. The risk assessment drawn up by the Border Guard Administration mentions factors which do not cause any danger as risk factors which may cause marine pollution. For example, the lack of pollution control equipment has been mentioned as a risk. The risk assessment drawn up by the Border Guard Administration does not properly describe marine pollution consequences. For example, the reduction in border guarding capacity and exceeding of the budget have been mentioned as marine pollution consequences but extensive environmental damage has been discussed superficially.

However, the new national oil spill contingency plan contains a thorough risk assessment.

**64. The state has many opportunities to make polluters pay for environmental damage.** For example, compulsory liability insurance for dangerous companies, fines in the case of violations, foundation of the oil fund. The sanctions, however, should be the same for land and marine pollution.

**65. The possibilities to cover pollution control expenses have been used inadequately.** On 23 July 2004, a legal act took effect according to which Estonia became a party to the International Oil Pollution Compensation Fund of 1971 and its protocol of 1992. As the amount agreed in 1992 (315 million dollars as maximum indemnity) does not cover all possible pollution control costs today, the fund decided to draw up a new protocol of 2003 according to which the maximum amount of indemnity would be 1.165 billion dollars. All Baltic Sea countries, except Estonia, Poland and Russia, have become a party to this protocol. During the audit, the Ministry of the Environment was making preparations for becoming a party to the protocol of 2003.

**66. Recommendations 1 to 2 to the Minister of the Interior for improving the preparedness for extensive marine pollution:**

- 1) The EPA should specify the head ministry which would manage preparedness for and response to extensive marine pollution, be responsible for risk assessment and risk reduction, drawing up a contingency plan, determining the required resources and their procurement as well as for training events and exercises.

#### **Opinion of the Minister of the Interior**

Appointment of a head ministry for crisis management is problematic because this regulation cannot be contradictory to the Government of the Republic Act and statutes of the ministries according to which the Ministries of the Interior, Economic Affairs and Communications and the Environment have their specific responsibilities in preventing and eliminating marine pollution and in alleviating its consequences and protecting the environment. The Ministry of the Interior can be directly responsible for pollution monitoring and pollution control, i.e. just one part of emergency response. "The Concept of Changes to the Legal Bases of Crisis Management" offers appointing head ministries for emergency prevention and emergency response as one solution. However, specific amendments to the legal acts will be known only in the second half of this year when the ministries have negotiated all amendments. It is possible that there will be two head ministries – one for emergency prevention and one for emergency response.

- 2) A comprehensive risk assessment should be drawn up in cooperation with the Ministry of Economic Affairs and Communications and the Ministry of the Environment in order to plan preparedness for an emergency resulting from extensive marine pollution; a risk description/assessment form should be drawn up and this form should include a general overview of all risk reduction measures implemented, their efficiency and costs from one side and the measures necessary to be implemented and their approximate costs from the other side so it is possible to take their effects in account in assessing the emergency.

#### **Opinion of the Minister of the Interior**

Risk assessments, preparedness plans and contingency plans for a specific emergency compiled by various ministries have to be interconnected better.

**Are the preparations for extensive marine pollution efficient?**

#### ***There are several shortcomings in the preparations for extensive marine pollution.***

A national oil spill contingency plan was drawn up during the audit period and it includes the roles of all parties involved. Today, the national oil spill contingency plan is inadequate and a part on action plans of agencies (it will be completed by the end of 2007) will be added to it. There are no preconditions for implementing the plan either. The pollution detection and elimination capacities do not comply with the minimum requirements of the Helsinki Convention. The compliance to the HELCOM minimum requirements is planned to be increased by 2010 in order to be ready to eliminate pollution accidents involving the marine environment of the Baltic Sea.

The preparations for extensive marine pollution have the following shortcomings:

- The plan does not include the responsibility of the Ministry of the Interior as the head ministry for managing emergency preparedness and emergency response;
- The existence and availability of the resources required for emergency response activities have not been ensured;
- There is no agreement between the Border Guard Administration and Maritime Administration on their cooperation in the case of an emergency.



Photo 5. MSC Napoli which carries dangerous chemicals is sinking due to a storm in the UK on 21 January 2007. AFP/Scanpix



**67. The marine pollution contingency plans have been fragmented so far and contained so-called grey areas.** In 1995-1999, the National Oil Spill Contingency Plan for Estonia was drawn up under the coordination of the Marine Inspectorate, which was in the area of government of the Ministry of the Environment, and with the help and financing (6 million kroons) of Denmark but it was never approved. The plan was drawn up by the Ministries of the Interior, Economic Affairs and Communications and the Environment. This plan did not provide clear answers to the following questions:

- Who is responsible for monitoring and elimination of heavy oil in the seabed?
- Who is responsible for elimination of marine pollution in waters under 5 meters deep?
- Who is responsible for elimination of pollution on the shores?
- Who is responsible for pumping sunken ships empty or bringing these to the surface if these ships endanger the environment.
- Who is responsible for constant monitoring of the situation after the primary elimination of pollution and for restoring the previous situation?

Although the Border Guard Administration and the Rescue Board under the lead of the Ministry of the Interior have eliminated all the most important marine pollution cases recently and there is an agreement with the agencies involved that the situation where the legal acts and plans do not specify who is responsible is not normal. If there are no preliminary agreements then the response is delayed, operational activities are inadequate and the consequences of an accident may be severer.

**68. The National Oil Spill Contingency Plan covers prevention, detection, elimination of pollution and restoration of the environment at the Baltic Sea.** A national oil spill contingency plan was prepared during the audit period. The plan discusses the strategy and preparedness and action plans of agencies (the latter will be ready by the end of 2007). Thus, the national plan will be the basis for compiling the action plans of agencies and organising efficient pollution control at sea and on the coast. The plan includes the roles of all parties involved and the need for resources has been calculated on the basis of the minimum requirements in the HELCOM recommendations. However, the role of the European Maritime Safety Agency and its possibilities to support member states in the case of pollution incidents has not been discussed.

**69. Three ministries have agreed upon the basic principles, responsibilities and roles as regards marine pollution control.** Depending on its extent and effect, marine pollution has been divided into three levels. In the case of the first level pollution, its elimination will be the responsibility of the local government, port, terminal or ship. In the case of second and third level pollution, cooperation of several agencies will be necessary for eliminating the pollution, depending on the location of the pollution. Monitoring of marine pollution and its early detection, its localisation and elimination at sea and coastal areas as well as informing other states of the pollution is the responsibility of the Ministry of the Interior (the duties will be carried out by the Northern Border Guard District, the Border Guard Sea Surveillance Centre and the Rescue Board). The Marine Systems Institute at the Tallinn University of Technology and the Estonian Maritime Academy (crisis management simulator) will forecast the spread of oil pollution and if necessary, provide expert assistance in planning and implementing pollution control.

The tasks of the Ministry of the Environment include environmental surveillance, restoration of natural and living environment and processing of the incident (carried out by the Environmental Inspectorate, the State Nature Conservation Centre, the Estonian Environmental Research Centre and the Estonian Meteorological and Hydrological Institute).

Maritime safety, economic environment conducive to pollution prevention and provision of pollution control resources are the responsibility of the Ministry of Economic Affairs and Communications (carried out by the Maritime Administration and the Technical Inspectorate).

The National Audit Office is of the opinion that the plan does not specify clearly that the Ministry of the Interior as the head ministry in the case of marine pollution is responsible for the activities from marine pollution prevention to restoration of the situation previous to the accident.

**70. There are no resources for implementing the plan and for complying with the minimum requirements of the HELCOM recommendations.**

According to the HELCOM recommendations, a state must comply with their minimum requirements in order to be ready for elimination of pollution accidents in the marine environment of the Baltic Sea. The capacity to respond to pollution at its most early stage means readiness to depart from the port within 2 hours, reach the place of the incident within 6 hours and start pollution control within 12 hours. Extensive pollution should be eliminated within two days. The physical capacity to localise pollution requires at least 2000 metres of booms. The physical capacity to eliminate pollution means pollution gathering on 4.5 square meters within 12 hours.

Today, the state has resources for eliminating small oil leaks of up to 7 tonnes. After the pollutions in spring 2006, more than 121 million kroons were given to the Border Guard Administration and the Rescue Board for acquiring what is needed for pollution control but this money does not allow for achieving the required preparedness. The Rescue Board purchased more equipment for gathering coastal pollution. The Border Guard Administration improved its marine monitoring capacity in order to ensure early detection of pollution. PVL 202 Kati, which is the only control ship suitable for sea, received new skimmers, booms and a work boat. In the upcoming years, the investment need of the Rescue Board, the Border Guard Administration and the Maritime Administration for elimination of oil pollution is about 1.4 billion kroons, plus annual running costs.

Today, the capacity of the Border Guard Administration to eliminate pollution is 0.6 square kilometres within 12 hours; with EVA 316, which is a multifunctional ship of the Maritime Administration, the capacity reaches 1.2 square kilometres within 12 hours. Two multifunctional ships will be acquired within the project of living environment development of the European Regional Development Fund (ERDF) and these will increase the capacity of the Border Guard Administration to eliminate pollution from 13%, which is the minimum requirement of the HELCOM, to 40% by 2010. The National Audit Office is of the opinion that due to the fact that pollution control equipment and other related equipment are expensive, their acquisition should be coordinated with the agencies involved in order to avoid overlapping and prefer multifunctional solutions.

**71. There is no agreement between the Border Guard Administration and the Maritime Administration on their cooperation in the case of an emergency.** The Border Guard Administration has conducted regular training events and exercises. The training events take place once in each quarter. However, the training of a crew of an oil control ship consists of theoretical



and practical exercises which last for 3 to 4 months each. The crew of EVA 316, which is a multifunctional ship of the Maritime Administration, has not participated in training events or exercises in cooperation with the crew of the ship of the Border Guard Administration. The crew of EVA 316 has undergone one single training session which was conducted by Lamor Oy which supplied its marine pollution control equipment. As there is no cooperation agreement between the Maritime Administration and the Border Guard Administration, then there is no agreement on the bases for joint training events and exercises or cooperation in pollution control.

**72. We can use the help of our neighbouring countries in pollution control.** In 2007, Estonia concluded a cooperation agreement with Sweden to ensure sea and flight rescue at the Baltic Sea. A similar agreement has been concluded with Finland as well and preparations for such an agreement with Latvia are under way.

**73. Recommendation 3 to 5 to the Minister of the Interior with an aim of improving preparedness for extensive marine pollution:**

- 3) The national oil spill contingency plan should specify the Ministry of the Interior as the head ministry for managing emergency preparedness and emergency response in the case of extensive marine pollution;

**Opinion of the Minister of the Interior**

Appointment of a head ministry for crisis management is problematic because this regulation cannot be contradictory to the Government of the Republic Act and statutes of the ministries according to which the Ministries of the Interior, Economic Affairs and Communications and the Environment have their specific responsibilities in preventing and eliminating marine pollution and in alleviating its consequences and protecting the environment. The Ministry of the Interior can be directly responsible for pollution monitoring and pollution control, i.e. just one part of emergency response. Risk assessments, preparedness plans and contingency plans for a specific emergency compiled by various ministries have to be interconnected better. "The Concept of Changes to the Legal Bases of Crisis Management" offers appointing head ministries for emergency prevention and emergency response as one solution. However, specific amendments to the legal acts will be known only in the second half of this year when the ministries have negotiated all amendments. It is possible that there will be two head ministries – one for emergency prevention and one for emergency response.

- 4) The existence and availability of the resources required for emergency response activities should be ensured. A general overview of the resources necessary, existing and absent for meeting the minimum requirements of the HELCOM recommendations should be drawn up as well as a long-term investment plan to acquire resources necessary for emergency response and the acquisition of absent but required resources should be coordinated;

**Opinion of the Minister of the Interior**

Development of the detection and control capacity continues regularly and the required investments have been planned in the development plan of the area of government of the Ministry of the Interior for 2008-2011. A cooperation shop for detecting and eliminating marine pollution has started

its activities during preparation of the development plan for internal security and this shop specifies the activities necessary for developing the field in 2009-2013. Additions to the national oil spill contingency plan will be made continuously and its third part (pollution control action plan) will be completed by August 2007.

- 5) A cooperation agreement should be concluded between the Border Guard Administration and Maritime Administration, the procedure for participating in national and international exercises/operations and cooperation in pollution control should be specified.

**Opinion of the Minister of the Interior**

The cooperation agreement between the Border Guard Administration and the Maritime Administration will be concluded this year.

**Opinion of the Minister of Economic Affairs and Communications**

A task force has been formed for concluding the cooperation agreement between the Border Guard Administration and the Maritime Administration and their first meeting took place on 11 April 2007. The task force agreed on the principles for the agreement during the meeting. The cooperation agreement will solve the training and exercise issues as well.

## The preparedness of the state for an emergency resulting from a transportation accident involving dangerous chemicals

### What is an emergency resulting from a transportation accident involving dangerous chemicals?

Did you know that the most dangerous of the solid chemicals transported on railways through Tallinn is ammonium nitrate which may cause big explosions if it gets in touch with flames or oil. For example, the explosion of just 7 rail cars full of ammonium nitrate can destroy the whole Kopli District.

A **transportation accident involving dangerous chemicals** within the meaning of this audit report is a road or railway accident involving chemicals<sup>10</sup> which have characteristics harmful for health, the environment or property. For example, a first category railway accident may be accompanied by an extensive fire, extensive environmental pollution, casualties and a long-term interruption in railway traffic.

**74.** Explosion risks are high in the case of transporting explosives and gasses. According to the statistics on 2006, 6,400 tonnes of explosives and 171,600 tonnes of gasses were transported on railways. Consequences of transportation accidents involving dangerous chemicals may be very severe. Should one 60-tonne fuel tank explode, this explosion may cause serious damage within a 150-metre radius, injure and kill unprotected people. The danger zone may reach up to 850 metres from ground zero. Should one ammonium nitrate wagon explode, up to 50 percent of unprotected people may die within an 850-metre radius. The danger zone may reach up to 5000 metres from ground zero.

**75.** Dangerous cargo is a risk factor in 9 counties: Harju, Järva, Lääne-Viru, Ida-Viru, Jõgeva, Tartu, Põlva, Valga and Võru Counties. There has been no serious railway accident involving dangerous chemicals in Estonia within 15 years. A smaller accident took place in 2004 when a pile of old sleepers took fire near a railway line in the Ülemiste cargo terminal. This caused a big fire and due to unfavourable wind direction the heat and flames almost reached oil trains. In addition, two heating oil tank cars have derailed and leaked near Ülemiste Station: a propane tank car has derailed near Peterburi Road in Lasnamäe, Tallinn, and there has been a heating oil leak (54 tonnes) on one of the railway lines in Muuga Harbour.



Photo 6. A train accident involving dangerous chemicals in Germany on 23 January 2007. AFP/Scanpix

<sup>10</sup> Classification of dangerous chemicals has been harmonised in the European Union and the respective list is in Annex 1 to the Council Directive 67/548/EEC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

76. Transport of dangerous chemicals on roads is a risk as well. The biggest risks may realise on the main roads of Estonia and on their railway crossings. The road tanker traffic and handling of chemicals (fuel), e.g. filling tanks, in gas stations surrounded by many buildings are especially dangerous.

77. In the case of a transportation accident involving dangerous chemicals, the risk groups include handlers of means of transport and passenger as well as people living and staying near the accident area. The rescue system, law protection, transportation, environmental, medical and social institutions have to be involved in resolving the emergency.

78. In addition to the Emergency Preparedness Act (EPA), preparedness for and response to an emergency resulting from a transportation accident involving dangerous chemicals has been regulated by the Road Transport Act, and the Regulations for Transporting Dangerous Chemicals on Roads, which have been derived from the RTA, by the Railway Act and the Chemicals Act as well as the Requirements for Transport Equipment and the Procedure for Identification, Classification, Packaging and Labelling of Dangerous Chemicals, which have been derived of the Chemicals Act. As railway and road transportation accidents involving dangerous chemicals may cause air, soil and groundwater pollution, we will basically be dealing with environmental pollution on land. There is no comprehensive preparedness or contingency plan for an emergency resulting from a transportation accident involving dangerous chemicals (incl. extensive pollution). However, the state has the obligation follow the precautionary and preventive principles which have been derived from the environmental policy of the EU treaty.

79. The National Audit Office based its assessment of the efficiency of the risk management process as regards preparedness for an emergency resulting from a transportation accident involving dangerous chemicals in the opinion of external experts.

Emergency preparedness = emergency prevention + preparations for an emergency

**Is the prevention of an emergency resulting from a transportation accident involving dangerous chemicals efficient?**

***The prevention of an emergency resulting from a transportation accident involving dangerous chemicals is inadequate.***

Risk assessments are made by the Ministry of the Interior (Rescue Board), the Ministry of Economic Affairs and Communications (Road Administration, Railway Inspectorate), the Ministry of the Environment (Environmental Inspectorate) as well as the Ministry of Social Affairs (Healthcare Board). Thus, various agencies have determined why, where and when an emergency may occur, they have assessed the likelihood of the emergency and the extent of its consequences but no comprehensive risk assessment has been made. Furthermore, not all risks which need managing have been reduced.

Prevention of emergencies resulting from transportation accidents involving dangerous chemicals has the following shortcomings:

- No single ministry has been appointed head ministry for the emergency due to which nobody is responsible for management as regards emergency preparedness and response;
- There is no comprehensive risk assessment for planning preparedness for an emergency resulting from a transportation accident involving dangerous chemicals (incl. extensive pollution). The risk assessment does not include the analysis of the evacuation need in the case of an emergency;

- The national arrangements for monitoring dangerous cargo are inefficient because the distribution of responsibilities between the relevant authorities is not clear and the extent of the checks (incl. labelling checks) is inadequate;
- All risks requiring attention have not been reduced which includes the fact that there is inadequate monitoring of dangerous chemical transport on Estonian roads and railways and the minimum liability insurance premium of economic entities is too small to cover the possible damage, etc.

**80. There is no head ministry for an emergency resulting from a transportation accident involving dangerous chemicals (incl. extensive pollution).** The responsibilities regarding emergency preparedness and emergency response (pursuant to the EPA) have been divided between the Ministry of the Interior (rescue), the Ministry of Economic Affairs and Communications (transport safety), the Ministry of the Environment (environmental protection) and the Ministry of Social Affairs (health). Some responsibilities have been placed on local governments, railway infrastructure managers and handlers of dangerous chemicals.

**81. The likelihood of a transportation accident involving dangerous chemicals is high and its consequences would be serious** – this opinion is in the Summary of Risk Assessments of Estonian Ministries 2005 which the Ministry of the Interior has prepared and the Government Crisis Management Committee has approved. The National Audit Office considers this assessment to be correct. However, it must be mentioned that the information on which the overall assessment was based is scattered in different documents and it does not make it easy to take the implemented preventive measures into account and to plan preventive and response measures. Based on the methodology of the Ministry of the Interior, the Ministry of Economic Affairs and Communications has drawn up a risk assessment for a transportation accident involving dangerous chemicals. But the part of the methodology on risk reduction measures is too general. For example, the risk description/assessment form for an emergency resulting from a transportation accident involving dangerous chemicals<sup>11</sup> does not contain any risk reduction measures and their costs.



Photo 7. A truck landed on the railway as a result of an accident in the Czech Republic on 12 March 2007. AP/Scanpix

<sup>11</sup> A risk description/assessment form is drawn up for each emergency and this form indicates the likelihood of the emergency (1 to 5), the extent of its consequences (A to E), the risk category determined on the basis of the above and the preventive measures. Transport accidents involving dangerous chemicals belong in the risk category of 4D which means that the likelihood for the emergency is high and its consequences are very severe.

**82. The quality of the risk assessment is inadequate for planning emergency preparedness at the state level.** Various Ministries have drawn up risk assessments of limited scope but there is no comprehensive risk assessment. The Ministry of the Environment has to be involved in order to identify any possible environmental damage. The involvement of the Ministry of Social Affairs is necessary for forecasting the number of people injured and identifying the possible injuries.

**83.** The Ministry of Economic Affairs and Communications which is responsible for prevention of accidents during transport of dangerous chemicals has drawn up a risk assessment which does not indicate where accidents may take place, of what nature these accidents may be and what kind of consequences these might have, etc. Possible consequences for people's lives and health have been considered minimally.

**84.** The Rescue Board which is responsible for responding to an emergency resulting from a transportation accident involving dangerous chemicals has drawn up a risk assessment which indicates the likelihood of the emergency, the extent of its consequences, the number of casualties and the extent of pollution it may incur. The assessment does not show where the accidents may happen, what are their more detailed consequences (affected area, number of casualties, type of pollution, etc.). However, local governments under the supervision of the Rescue Board have drawn up a more detailed risk assessment for emergencies which may happen on their territory.

**85.** Nobody has been made responsible for population evacuation arrangements and no analysis of an evacuation need in the case of an emergency has been made. Furthermore, there is no plan which would specify evacuation arrangements (incl. the duties of all parties involved), the places where people would be evacuated, transportation needs, protection of the property of the evacuees, etc. Evacuation has partly been touched upon in the crisis management plans of local governments but these do not mention the duties of ministries as regards evacuation. The national crisis management plan also specifies that an annex will be drawn up on population evacuation.

**86. The national arrangements for monitoring transport of dangerous chemicals are inefficient because the distribution of responsibilities between the relevant authorities is unclear and the extent of the checks is inadequate.** Surveillance can be considered efficient if it is ensured that violations in transporting dangerous chemicals are prevented/avoided, detected and the shortcomings eliminated. The Chemicals Act specifies that the transporting package of dangerous chemicals and its labelling have to meet international regulations. In the case of road or railway transport of dangerous chemicals, their handlers have to appoint a safety advisor who will be responsible for preventing damage to people, property or the environment as a result of such activities and who knows the activities and procedures which ensure safety. A safety advisor has to undergo training and pass an exam.

The Chemicals Notification Centre is not informed of all chemicals which transit goes through Estonia although the Chemicals Act requires this to be done.

The National Audit Office supports the opinion of the Chancellor of Justice that the Ministry of Economic Affairs and Communications with the Ministry of the Interior should prepare a draft act to increase the safety of the chain of



transit and at the same time to regulate cooperation between the relevant authorities who carry out surveillance over transport of dangerous chemicals.

**87. Labelling checks of dangerous railway cargo are inadequate.** The Railway Inspectorate issues a safety certificate to railway companies. The opportunities of the Inspectorate to carry out surveillance over dangerous cargo (labelling, whether a safety advisor is there, etc.) are inadequate and cooperation with other relevant authorities has not been regulated. The Railway Inspectorate has the right to check whether labelling meets railway transport regulations (UN marking system). The Tax and Customs Board has the competence and technical facilities for substantial labelling checks but considering the large transit volumes, it is not very likely that just customs checks can ensure adequate surveillance. The Chemicals Notification Centre has the required competence but no legal basis for surveillance over transport of dangerous chemicals on railways. Wrong labels may cause incorrect response to events which may result in considerably more serious consequences.

**88. Not all risks which have to be managed have been reduced.** For example the national coordination centres are in the area which may be affected by a transportation accident involving dangerous chemicals (right next to the Kopli Freight Station). Several risk reduction opportunities have not been used. Regional rescue centres, local governments and counties do not have a complete overview of the list and quantity of dangerous chemicals transported on Estonian roads and railways today. Depending on the risk class of dangerous chemicals, a safe transport route and recommendable time have to be chosen and if necessary, the freight has to be monitored as well. One option is to take the sorting stations for dangerous chemicals out of densely populated areas and plan detours for railway and road traffic. For example, planning of rearrangements in the railway transport in Tallinn has begun. Relocation of the Tartu Freight Station has been planned to take place in 2010. Another option is to reduce the amount and waiting time of dangerous freight in densely populated areas. For example, Estonian Railways and the City of Tartu have already concluded an agreement that ammonia trains do not stop in the city and they are planning to reduce the number of fuel trains as well. In the case of dangerous freight, risks can be reduced by forbidding dangerous freight at peak hours and on stretches which are used the most. It must be born in mind that establishing restrictions for railway transport of dangerous chemicals increases the respective road transport and vice versa.

**89. The minimum rate of compulsory liability insurance of companies is too low to cover the potential damage.** Companies with a risk of causing big accidents have to have liability insurance to cover the damage caused by the biggest possible accident with the most serious consequences. A liability insurance contract has to cover risk insurance in the case of environmental damage as well. It has not been specified who will estimate the possible damage and set the insurance amount. Estonian Railways is not a company which handles dangerous chemicals as specified in the Chemicals Act but as a transport company it has to have liability insurance. For example, the lowest amount of insurance cover for a railway company which provides railway transport services is 7 million kroons which is clearly inadequate.

**90. The sanctions for environmental damage are too mild.** For example, the European Commission intends to establish fines from 300,000 euros to



1.5 million euros. As fines are considered inadequate for companies, criminal punishment is also considered as a sanction for environmental damage. In addition to setting fines, the state can prohibit, restrict or stop the activities of a dangerous company if this is justified and necessary. The National Audit Office is of the opinion that the fine rates established for environmental damage need reviewing.

**91. Recommendations 1 to 4 to the Minister of the Interior for improving preparedness for an emergency resulting from a transportation accident involving dangerous chemicals:**

- 1) A head ministry has to be specified in the EPA and this ministry should be responsible for preparedness for and managing response to an emergency resulting from a transportation accident involving dangerous chemicals (incl. extensive pollution);

**Opinion of the Minister of the Interior**

Appointment of a head ministry for crisis management is problematic because this regulation cannot be contradictory to the Government of the Republic Act and statutes of the ministries according to which the Ministries of the Interior, Economic Affairs and Communications and the Environment have their specific responsibilities in preventing transportation accidents involving dangerous chemicals, in eliminating the resultant pollution, alleviating their consequences and protecting the environment. The Ministry of the Interior can be directly responsible for responding to a transportation accident involving dangerous chemicals and rescue arrangements, i.e. just one part of emergency response. “The Concept of Changes to the Legal Bases of Crisis Management” offers appointing head ministries for emergency prevention and emergency response as one solution. However, specific amendments to the legal acts will be known only in the second half of this year when the ministries have negotiated all required amendments. It is possible that there will be two head ministries – one for emergency prevention and one for emergency response.

- 2) A comprehensive risk assessment for an emergency resulting from a transportation accident involving dangerous chemicals (incl. extensive pollution) should be drawn up in cooperation with the Ministry of Economic Affairs and Communications, the Ministry of the Environment and the Ministry of Social Affairs; an analysis of the evacuation need should be added to the risk assessment; a risk description/assessment form should be drawn up and this form should include a general overview of all risk reduction measures implemented and their costs from one side and the measures which need implementation and their approximate costs from the other side so it is possible to take their effects into account in assessing the emergency;

**Opinion of the Minister of the Interior**

Risk assessments, preparedness plans and contingency plans for a specific emergency compiled by various ministries have to be interconnected better.

- 3) National surveillance over dangerous freight should be put in order in cooperation with the Ministry of Economic Affairs and Communications, the Ministry of the Environment and the Ministry of Social Affairs in order to ensure optimum division of labour between competent agencies and adequate checks (including labelling checks);

### Opinion of the Minister of the Interior

The Ministry of the Interior can be directly responsible for responding to transportation accidents involving dangerous chemicals and rescue arrangements, i.e. just one part of emergency response.

- 4) Reduction of risks which need managing as regards transport of dangerous chemicals, i.e. adequate surveillance over dangerous freight on Estonian roads and railways, should be organised and the minimum rates of compulsory liability insurance of companies should be increased, etc., in cooperation with the Ministry of Economic Affairs and Communications, the Ministry of the Environment and the Ministry of Social Affairs;

### Opinion of the Minister of the Interior

The Ministry of the Interior can be directly responsible for responding to transportation accidents involving dangerous chemicals and rescue arrangements, i.e. just one part of emergency response.

**Are the preparations for an emergency resulting from a transportation accident involving dangerous chemicals efficient?**

#### *The preparations for an emergency resulting from a transportation accident involving dangerous chemicals are inefficient.*

Various ministries, local governments, the railway infrastructure manager and handlers of dangerous chemicals have drawn up plans of limited scope. The activities of various agencies have been planned but there is no comprehensive contingency plan which would specify the roles of all parties involved and all resources necessary. In addition, no preconditions for emergency resolution have been created by conducting training events/exercises and ensuring availability of resources.

To sum up, the preparations for emergencies resulting from transportation accidents involving dangerous chemicals have the following shortcomings:

- No comprehensive contingency plan for an emergency resulting from a transportation accident involving dangerous chemicals (incl. extensive pollution) which contains a clear chain of management as regards emergency response, specifies the roles of all parties involved (incl. in the case of evacuation) and covers all resources necessary for emergency response has been drawn up;
- The existence and availability of the resources required for emergency response activities have not been ensured;
- There have been not enough training events and exercises to ensure preparedness of all parties involved;
- There is no agreement between the Rescue Board and the Road Administration on their cooperation in the case of an emergency;
- There is no operational radio communications system which would work at an adequate level.

**92. It is not unambiguously clear who does what how and when in the case of an emergency resulting from a transportation accident involving dangerous chemicals.** The Rescue Board, the Road Administration, the Railway Inspectorate, Estonian Railways, the Environmental Inspectorate and the Healthcare Board have plans which are adequate for responding to everyday accidents but inadequate for ensuring efficient action in the case of an emergency. A comprehensive plan for an emergency resulting from a transportation accident involving dangerous chemicals (incl. extensive pollution) should specify the resources and activities of all parties involved.

For example, the national pollution control plan which was completed at the beginning of 2007 and covers just marine pollution should also contain a part on land pollution which discusses air, soil and groundwater pollution.

**93. Response to railway transportation accidents involving dangerous chemicals is the responsibility of the Rescue Board in cooperation with Estonian Railways Ltd.** Cooperation agreements have been concluded between the Rescue Board and the National Defence League and Estonian Railways and the Rescue Board in order to ensure smoother cooperation. The role of the Railway Inspectorate concerns primarily prevention and it has the duty to inform and investigate in the case of an emergency. For the purpose of investigating railway traffic accidents the Government of the Republic will found a structural unit of the Ministry of Economic Affairs and Communications and this unit will make independent investigation decisions. Estonian Railways and the Rescue Board have the resources required for responding in the case of emergencies (but these are inadequate for resolving an emergency) and the respective exercises have been conducted regularly as well.

**94. Response to road transportation accidents involving dangerous chemicals is the responsibility of the Rescue Board in cooperation with the Road Administration.** For the purposes of smoother cooperation the Road Administration and the Police Board have concluded a cooperation agreement but there is no such agreement between the Rescue Board and the Road Administration yet. The Road Administration has adequate supplies – traffic signs, road construction materials, culverts, bulk materials which ensure that roads are passable in the case of an emergency. For example, the supplies include 12 bridges which can be assembled on the spot. The Road Administration has its own quarries for crushed stone, sand, gravel, etc., or cooperation agreements have been concluded with the respective companies. Furthermore, they have enough special equipment some of which is ordered from private companies. Road managing companies have adequate supplies as well. All local road administrations have the minimum required amount of supplies, special equipment and people to cope with restoring traffic. Each local road administration has an overview of its operation supplies but the Road Administration does not have a general overview of all operation supplies. The Road Administration forms a reserve for unexpected work each year which cannot be transferred to the following year. The reserve was 3 million kroons in 2006. If a part of the amount earmarked for unexpected work is left unused in the end of the year, it will be used for road repairs.

**95. Involving companies in emergency preparedness and emergency response will improve emergency preparedness of the state.** For example Estonian Railways Ltd. has a contingency plan, a procedure for notifying of an event endangering railway traffic and for responding to such an event, an action plan for railway traffic employees in the case of danger and unusual situations, safety regulations for transporting dangerous goods, a guide to elimination of emergency situations on the railways of Estonian Railways Ltd. and danger lists for dangerous freight bearing UN markings. Estonian Railways has a rescue train with 12 crewmembers who have undergone special railway rescue training, rescue equipment adapted for railway accidents, including chemical diving equipment. The response time of the rescue train is 40 minutes during working hours and 1 hour at night. In addition, each bigger station has primary equipment for eliminating an emergency and/or its consequences. Railway repair workshops all over

Estonia have first aid kits which allow for emergency work on loaded rail cars. Locomotives have primary rescue equipment.

For example, implementation of the safety plan of the Tartu Freight Station will begin in 2007 on the basis of an agreement between Estonian Railways, the City of Tartu and the Southern Estonian Rescue Centre (the costs of Estonian Railways will be 35 million kroons). The safety measures include acquisition of foam, construction of a safety fence, mounting of emergency sirens and surveillance cameras, etc.

**96. Estonian Railways has no right to use emergency vehicles and it does not have a radio communications network which is compatible with the one of the state.** This hinders fast response and operational elimination of accidents. The special passenger car drivers who are members of the rescue train of Estonian Railways and the operational manager of Estonian Railways have no right to drive emergency vehicles. In addition to that, the radio communications used by the rescue train is not compatible with the operational radio communications of the state. Therefore, the GSM network has been the main channel of communication in eliminating railway accidents. The functioning of this network would most likely be disturbed in the case of an emergency.

**97. The Rescue Board has people, equipment and supplies for eliminating everyday accidents.** About 70 percent of the rescue vehicles are older than 10 years. All vehicles have rescue equipment but only newer vehicles have technical equipment which meets the EU requirements (e.g. hydraulic and pneumatic equipment). Some positions in the Rescue Board are vacant and this has caused problems even in normal circumstances. In the case of an emergency, the Board will be able to send out about 200 rescuers. The rescue services have primary foam and absorbent supplies and additional foam will be obtained on the basis of existing contracts.

**98. The state does not have enough resources for solving an emergency resulting from a transportation accident involving dangerous chemicals.** The Rescue Board and other agencies have identified their needs (limited in scope) for responding to a transportation accident involving dangerous chemicals but there is no comprehensive list of resources required for that. A long-term investment plan for obtaining the absent but required resources has been drawn up.

**99. There have been few interagency exercises on transportation accidents involving dangerous chemicals and not all important parties have been involved in these.** According to the data submitted by the Rescue Board, practical complex exercises on elimination of transportation accidents involving dangerous chemicals (only) have been conducted in a couple of cases: Valga Rescue which was an interagency exercise in 2002 and Bere, which was a national complex exercise in 1996. The Rescue Board and Estonian Railways have cooperated in organising regular training events and exercises. Exercises on railway transportation accidents involving a limited number of agencies have taken place in Tallinn in 2004 and at the Tartu Freight Station in 2005. The Rescue Board, Estonian Railways, representatives of the county and the city took part of the exercises. However, the Railway Inspectorate and many other agencies did not participate in the exercises but they also have a role in ensuring preparedness for and responding to an emergency resulting from a transportation accident involving dangerous chemicals.

**100. The state has no operational radio communications which would work at an adequate level.** The construction of the national Enhanced Digital Access Communications System (EDACS) which was planned in 1992-1998 was not completed. Today, this is functioning only in Tallinn, in some parts of Ida Viru County and a separate station is in Tartu region. In the case of bigger operations (extensive rescue work, big events, etc.), the EDACS is overloaded and operations management is hindered. As a temporary solution, the agencies have used ordinary analogue radio networks of two-meter waveband which cannot be interconnected and which are not secure, i.e. information exchange of operational services can be overheard using simple equipment. The use of mobile phones as an alternative is not a solution because the GSM network is usually overloaded in the case of bigger accidents. The lack of a common radio communications network meeting international standards hinders crisis communication and emergency response.

An operational radio communications system which will be used for ensuring the national security of Estonia, people's life and health, security and public order will be launched in 2008. The new operational radio communications network ensures the required operational cooperation between various agencies. Furthermore, other institutions involved in crisis management can be connected to the network as well.

**101. Recommendations 5 to 8 to the Minister of the Interior for improving preparedness for an emergency resulting from a transportation accident involving dangerous chemicals:**

- 5) A comprehensive contingency plan for an emergency resulting from a transportation accident involving dangerous chemicals (incl. extensive pollution) should be drawn up in cooperation with the Ministries of Economic Affairs and Communications, the Environment and Social Affairs and this plan should contain a clear chain of management as regards emergency response, specify the roles of all parties involved (incl. in the case of evacuation) and cover all resources necessary for emergency response;

**Opinion of the Minister of the Interior**

Appointment of a head ministry for crisis management is problematic because this regulation cannot be contradictory to the Government of the Republic Act and statutes of the ministries according to which the Ministries of the Interior, Economic Affairs and Communications and the Environment have their specific responsibilities in preventing transportation accidents involving dangerous chemicals, in eliminating the resultant pollution, alleviating their consequences and protecting the environment. The Ministry of the Interior can be directly responsible for responding to a transportation accident involving dangerous chemicals and rescue arrangements, i.e. just one part of emergency response. Risk assessments, preparedness plans and contingency plans for a specific emergency compiled by various ministries have to be interconnected better. "The Concept of Changes to the Legal Bases of Crisis Management" offers appointing head ministries for emergency prevention and emergency response as one solution. However, specific amendments to the legal acts will be known only in the second half of this year when the ministries have negotiated all required amendments. It is possible that there will be two head ministries – one for emergency prevention and one for emergency response.

- 6) The existence and availability of the resources required for emergency response activities should be ensured. A general overview of the resources which are necessary, existent and absent should be drawn up; the acquisition of the absent but required resources should be done in cooperation.

**Opinion of the Minister of the Interior**

For the purpose of better response to transportation accidents involving dangerous chemicals the Development Plan of the Government Area of the Ministry of the Interior 2008-2011 includes many rescue investments. Within the preparation of the development plan for internal security cooperation shops for the prevention of and response to accidents and fires have started their work and these shops will agree upon activities necessary for developing the above fields in 2009-2013.

- 7) Training events and exercises should be organised for all parties involved to ensure preparedness for emergencies resulting from transportation accidents involving dangerous chemicals;

**Opinion of the Minister of the Interior**

For the purpose of better response to transportation accidents involving dangerous chemicals the Development Plan of the Government Area of the Ministry of the Interior 2008-2011 includes many rescue investments. Within the preparation of the development plan for internal security cooperation shops for the prevention of and response to accidents and fires have started their work and these shops will agree upon activities necessary for developing the above fields in 2009-2013.

- 8) A cooperation agreement should be concluded between the Rescue Board and the Road Administration, the principles for using heavy equipment in rescue work should be determined as well as the procedure for participating in domestic and international exercises/operations and emergency response times.

**Opinion of the Minister of the Interior**

The Ministry of the Interior does not consider the conclusion of a cooperation agreement between the Rescue Board and the Road Administration very important because heavy equipment for rescue work can be hired from private companies as well as from the National Defence League and the defence forces. However, the cooperation between various agencies has to continue to improve responding to transportation accidents involving dangerous chemicals.

/digitally signed/

Ülle Madise  
Chief Auditor of the Second Audit Department

## Annex 1. Recommendations

### **Recommendations to the Minister of the Interior as regards making emergency preparedness arrangements more efficient by adding the following principles to the Emergency Preparedness Act (EPA) and other legal acts on crisis management:**

1. Depending on an emergency, a head ministry should be appointed and that ministry should be responsible for emergency preparedness and emergency response management. The head ministry has to have the powers, resources and support from the parties involved which all are necessary for fulfilling this role. An alternative would be to appoint the Ministry of the Interior the head ministry for all emergencies.
2. An entity responsible for population evacuation should be appointed and that entity should carry out an analysis of the need to evacuate in the case of an emergency and draw up the respective evacuation plan which includes evacuation arrangements (duties of all parties involved, including the ministries), places where people would be evacuated and the existence of required conditions in these places, transportation needs, protection of the property of evacuees, etc.
3. The head ministry should carry out a comprehensive risk assessment, which is necessary for planning emergency preparedness, and a risk description/assessment form which contains a comprehensive overview of all implemented risk reduction measures, their efficacy and costs from one side and measures which need to be implemented and their approximate costs from the other which would allow for their effect to be taken into account in assessing an emergency.
4. The head ministry should draw up a complete overview of emergency preparedness. For this purpose the involved ministries and counties should forward information on emergency preparedness (incl. risk assessments, crisis management plans) to the head ministry.
5. The head ministry should link making a risk assessment of an emergency with the development plans of the ministries and the budget so it is possible to improve planning and implementation of actions necessary for risk reduction.
6. Periodic analyses of preparedness should be carried out to find out the shortcomings in order to constantly increase the level of emergency preparedness of the state.
7. Emergencies should be prioritised for each year on the basis of the assessments given in the summary of risk assessments of the ministries and financing for ensuring preparedness for the top priority emergency (i.e. risk reduction plan) should be planned in the state budget.
8. In managing response activities to emergencies regulated by special acts (Infectious Animal Disease Control Act, Communicable Diseases Prevention and Control Act) the control committees should function as crisis management teams.
9. The head ministry should draw up a comprehensive contingency plan which should contain a clear chain of management as regards emergency response, specify the roles of all parties involved and cover all resources necessary for emergency response.
10. The head ministry should ensure the existence and availability of the resources required for emergency resolution. It should also prepare a comprehensive overview of necessary, existing and absent but required resources, draw up a plan for long-term investments into acquiring the absent resources and organise coordinated procurement of absent but required resources, e.g. personal protective equipment.
11. The head ministry should draw up a plan for training events and exercises on emergency response and organise its implementation to ensure that the preparedness of the parties involved is at the adequate level.



**Recommendations to the Minister of Agriculture for improving the preparedness for an emergency resulting from an infectious animal disease (bird flu):**

1. A risk description/assessment form should be drawn up and it should contain a general overview of all implemented risk reduction measures, their efficacy and costs from one side and measures which need to be implemented and their approximate costs from the other which would allow for their effect to be taken into account in assessing the emergency.
2. The Infectious Animal Disease Control Act and the contingency plan should be reviewed so it is clear that infectious animal disease control committees will act as crisis management committees during emergency response.
3. Bird flu training events and exercises should be conducted in all counties in order to ensure adequate preparedness of all parties involved.
4. The state operation supplies of food should be completed in order to ensure food supply to the population in the case of an emergency.

**Recommendations to the Minister of Social Affairs for improving the preparedness for an emergency resulting from a pandemic (influenza pandemic):**

1. The foundation of a national influenza centre should be completed within 2007 and its laboratory basis should be determined (influenza reference lab) in order to make it possible for Estonia to join the WHO network of influenza centres;
2. A risk description/assessment form for a pandemic should be drawn up and it should contain a general overview of all implemented risk reduction measures, their efficacy and costs from one side and measures which need to be implemented and their approximate costs from the other which would allow for their effect to be taken into account in assessing an emergency.
3. The Communicable Disease Prevention and Control Act should be amended to include a new influenza strain with a pandemic potential in the definition of an international health emergency which requires implementation of preventive measures, including restriction of movement if necessary. The respective changes have to be made to the Minister of Social Affairs Regulation "Quarantine Requirements and Procedure for Following These" as well so it is possible to declare a quarantine during an influenza pandemic.
4. The Communicable Disease Prevention and Control Act and the preparedness plan for an influenza pandemic should be amended so that the role of an infection control committee is clear and it does not overlap that of a crisis management committee.
5. An action plan which covers all agencies involved and the part on the functioning of vitally important sectors should be added to the preparedness plan for an influenza pandemic in cooperation with the Ministry of the Interior and the ministry of Economic Affairs and Communications.
6. The absent but required resources have to be procured (incl. for all agencies involved) in order to ensure implementation of the preparedness plan for an influenza pandemic. Especially, more personal protective equipment and influenza drugs need to be procured in order to ensure that at least the risk group persons performing operationally and strategically important official duties can fulfil their duties during an influenza pandemic.
7. Influenza pandemic training events and exercises should be conducted in all counties in order to ensure adequate preparedness of all parties involved.
8. The adjustment of the list and quantities of operation supplies of the state as regards pharmaceuticals and medical equipment should be completed on the basis of risk assessment and plans have to be made for financing these from the state budget in order to form the supplies necessary for possible emergencies.
9. A procedure should be established for reviewing the list and quantities of the medications and medical equipment included in the operation supplies of the state and healthcare providers and if necessary, these should be adjusted at least once a year so the supplies meet the actual requirements.

**Recommendation to the Minister of the Interior with an aim of improving preparedness for extensive marine pollution:**

1. A head ministry which will be responsible for preparedness for and response to extensive marine pollution, preparing the respective risk assessment, risk reduction, preparing a contingency plan, a general overview of the resources required and arrangements for their acquisition as well as organising training events and exercises should be specified in the EPA.
2. A comprehensive risk assessment should be drawn up in cooperation with the Ministry of Economic Affairs and Communications and the Ministry of the Environment for planning preparedness for an emergency resulting from extensive marine pollution; a risk description/assessment form should be drawn up and this form should include a general overview of all risk reduction measures implemented, their efficiency and costs from one side and the measures necessary to be implemented and their approximate costs from the other side so it is possible to take their effects in account in assessing the emergency.
3. The national oil spill contingency plan should specify the Ministry of the Interior as the head ministry for managing emergency preparedness and emergency response in the case of extensive marine pollution.
4. The existence and availability of the resources required for emergency resolution should be ensured. A general overview of the resources necessary, existing and absent but required for meeting the minimum requirements of the HELCOM recommendations should be drawn up as well as a long-term investment plan to acquire resources necessary for emergency response and the acquisition of absent but required resources should be coordinated.
5. A cooperation agreement should be concluded between the Border Guard Administration and Maritime Administration, the procedure for participating in national and international exercises/operations and responding times should be specified.

**Recommendations to the Minister of the Interior for improving preparedness for an emergency resulting from a transportation accident involving dangerous chemicals:**

1. A head ministry which will be responsible for preparedness for and response to emergencies resulting from transportation accidents involving dangerous chemicals (incl. extensive pollution), preparing the respective risk assessment, risk reduction, preparing a contingency plan, a general overview of the resources required and arrangements for their acquisition as well as organising training events and exercises should be specified in the EPA.
2. A comprehensive risk assessment for an emergency resulting from a transportation accident involving dangerous chemicals (incl. extensive pollution) should be drawn up in cooperation with the Ministry of Economic Affairs and Communications, the Ministry of the Environment and the Ministry of Social Affairs; an analysis of the evacuation need should be added to the risk assessment; a risk description/assessment form should be drawn up and this form should include a general overview of all risk reduction measures implemented, their efficiency and costs from one side and the measures which need implementation and their approximate costs from the other side so it is possible to take their effects into account in assessing the emergency.
3. National surveillance over dangerous freight should be put in order in cooperation with the Ministry of Economic Affairs and Communications, the Ministry of the Environment and the Ministry of Social Affairs in order to ensure optimum division of labour between relevant agencies and adequate checks (including labelling checks).
4. Reduction of risks which need managing as regards transport of dangerous chemicals, i.e. adequate surveillance over dangerous freight on Estonian roads and railways, should be organised and the minimum rates of compulsory liability insurance of companies should be increased in cooperation with the Ministry of Economic Affairs and Communications, the Ministry of the Environment and the Ministry of Social Affairs.
5. A comprehensive contingency plan for an emergency resulting from a transportation accident involving dangerous chemicals (incl. in the case of extensive pollution) should be drawn up in cooperation with the Ministries of Economic Affairs and Communications, the Environment and Social Affairs and this plan should contain a clear chain of management as

regards emergency response, specify the roles of all parties involved (incl. in the case of evacuation) and cover all resources necessary for emergency resolution.

6. The existence and availability of the resources required for emergency resolution should be ensured. An overview of the resources which are necessary, existent and absent should be drawn up; the acquisition of the absent but required resources should take place in cooperation.

7. Training events and exercises should be organised for all parties involved to ensure preparedness for emergencies resulting from transportation accidents involving dangerous chemicals.

8. A cooperation agreement should be concluded between the Rescue Board and the Road Administration, the principles for using heavy equipment in rescue work should be determined as well as the procedure for participating in domestic and international exercises/operations and cooperation in eliminating pollution.

## Annex 2. Audit Overview

### Audit Purpose

The purpose of the audit was to assess the preparedness of Estonia for emergencies which may result from an infectious animal disease (bird flu), a pandemic (influenza pandemic), marine pollution and a transportation accident involving dangerous chemicals, and give recommendations to improve the level of preparedness.

### Assessment Criteria

The audit covered four Category I state level emergencies (high likelihood and severe consequences) in order to determine whether emergency preparedness activities at the required level have been conducted after an emergency has been declared a priority.

The audit did not cover all Category I emergencies (emergencies resulting from a natural disaster, great fire/explosion, mass poisoning and long-term/extensive power failure).

The audit results in an assessment of the risk assessments and plans for the four abovementioned emergencies and of the creation of preconditions for implementing the plans. The assessment of emergency preparedness was based on the following questions and criteria:

#### 1. Is the emergency assessment correct?

1.1. Has it been identified where, why and when an emergency may occur?

1.1.1. The risk assessment methodology includes all important components.

1.1.2. The risk assessment methodology has been correctly applied.

1.2. Is the assessment of the likelihood of the emergency and the extent of its consequences correct?

1.2.1. The risk assessment methodology makes it possible to correctly assess the likelihood of the emergency and the extent of its consequences.

1.2.2. The risk assessment methodology has been correctly applied.

1.2.3. Risk reduction measures have been taken into account.

1.2.4. The likelihood of an emergency and the extent of its consequences are constantly reviewed.

#### 2. Are emergency response plans correct?

2.1. Is the division of roles (who does what how and when) clear?

2.1.1. A contingency plan has been drawn up and it specifies who does what how and when.

2.2. Have the resource and service needs been identified?

2.2.1. There is an overview of the resources of a vitally important sector.

2.2.2. The required resources and services have been mapped.

2.2.3. Entities responsible for acquisition, storage and renewal of resources have been appointed.

2.2.4. Surveillance over the use of resources has been ensured.

2.3. Is the plan regularly assessed, tested and improved?

2.3.1. Regular improvement arrangements have been made and the improved plan is sent to all parties involved.

2.3.2. Entities responsible for continuous administration and improvement of the plan have been appointed.

2.3.3. It is ensured that the plan is adjusted if the situation changes.

2.3.4. It is ensured that the plan is tested in an exercise.

#### 3. Have preconditions been created for implementing the plan?

- 3.1. Have the required resources (financial, material and human resources) been ensured?
- 3.1.1. The required resources have been ensured:
- People have the required competencies. People who are responsible for emergency response have undergone the respective training and exercises in addition to their professional training.
  - The material resources are in working order, these have been stored as required and renewed if necessary.
  - The financial resources are in proportion with the importance of the possible emergency.
- 3.1.2. All resources ensured by contracts and other agreements have been specified.
- 3.1.3. Preservation of the required material resources is checked at least once a year.
- 3.1.4. The measures specified in the risk assessment and the resources specified in the plan are taken into account in drawing up the draft budget of the state.
- 3.1.5. Each vital sector has optimum operation supplies.
- 3.1.6. Preservation of the operation supplies is checked at least once a year.
- 3.1.7. The schedule for forming operation supplies as presented by the ministry which is responsible for the vital sector is taken into account in drawing up the draft budget of the state.
- 3.2. Have measures been taken for acquiring absent but required resources?
- 3.2.1. There is an overview of absent but required resources.
- 3.2.2. A long-term investment plan for obtaining the absent resources has been drawn up.
- 3.3. Are the resources available if required?
- 3.3.1. The emergency resources are available if required.
- 3.3.2. The operation supplies are available if required:
- Physical operation supplies are stored in various places;
  - The operation supplies stored on the basis of contracts are available if required.

#### **Former Audits Conducted by the National Audit Office**

- Inspection report no. 2-5/04/9 “Preparedness of the State for Eliminating Extensive Environmental Pollution Caused by an Accident on Land” of 23 February 2004;
- Inspection report no. 2-5/04/114 “Handling of Marine Pollution Cases and Elimination of Pollution” of 23 November 2004.

#### **Audit Scope and Methodology**

The National Audit Office conducts audits in compliance with the INTOSAI auditing standards. These standards require the audit to be planned and conducted in a way which ensures efficient auditing and identification of all material errors, inaccuracies and weaknesses of the internal control system.

The audit mainly consisted of the following **activities**:

- analysis of all legal acts dealing with the audited emergencies (See Annex 5);
- analysis of all risk assessments, plans and other documents dealing with the audited emergencies;
- 54 interviews with employees of the Ministries of the Interior, Agriculture, Social Affairs, the Environment, and Economic Affairs and Communications and representatives of institutions in their area of government as well as with employees of the University of Tartu Clinics Foundation, WHO Estonia and Estonian Railways Ltd. took place during the period from 12 April to 13 June 2006 (See Annex 6);
- assessment of the efficacy of the risk management process as regards emergency preparedness based in the opinion of Tony Moore and Stevyn D. Gibson, experts from Cranfield University, UK.

Vootele Hansen was also involved as an expert.

The procedural acts took place from 22 February until 30 June 2006. The audit activities on which this report is based were completed by 15 February 2007.

The audit was conducted in the **Ministries of the Interior, Agriculture, Social Affairs, the Environment and Economic Affairs and Communications.**

**Audit Team**

General responsibility: **Ülle Madise, Chief Auditor**

Responsibility for audit activities: **Markko Kard, Audit Manager**

Audit team: **Alina Undrits and Janno Veskimets, Senior Auditors**

## Annex 3. International Obligations as Regards Emergency Preparedness

In order to fulfil international obligations, Estonia has to ensure protection of people, property and the environment in the case of emergencies resulting from an infectious animal disease, an influenza pandemic, marine pollution and a transportation accident involving dangerous chemicals.

Estonia is participating in the Rapid Alert System for Biological and Chemical Agent Attacks and the Early Warning and Response System as a member of the European Commission and the World Health Organization (WHO). Estonia is a member of the European Centre for Disease Prevention and Control (ECDC) and the World Organisation for Animal Health (OIE – Office International des Epizooties).

Pursuant to the International Health Regulations (IHR), Estonia has to inform other countries of any disease-related dangers (including bioterrorism) if these may endanger the health of citizens of other states. Estonia has to diagnose the cause of a disease outbreak as well. The Central Virology Laboratory constantly informs the Health Protection Inspectorate of epidemiologically important pathogens and the HPI informs the Ministry of Social Affairs, the Ministry of Foreign Affairs, the WHO and the European Commission. Estonia is participating in the preparations for a pandemic of the communicable disease monitoring network of the European Commission and the activities of the Health Preparedness and Response Planning Group (PRPG) of the European Commission.

The regulations for the common protection of the Baltic Sea have been agreed in the Convention on the Protection of the Marine Environment of the Baltic Sea Area. One of the main principles of the convention is that the parties all together or individually will take all legal, administrative or other measures necessary for pollution prevention in order to achieve ecological recovery and balance of the Baltic Sea. Estonia became a party to the Helsinki Convention in 1992. The minimum recommendations for pollution control are given in the Helsinki Convention and HELCOM Response Manual. The recommendations proceed from the risk that 10,000 cubic meters of pollutant is discharged into the marine environment. Within 24 hours, this will cover 20 to 30 square kilometres. By becoming a party to the Convention of the International Maritime Organisation (IMO), Estonia has to save human lives in the rescue area of Estonia and be capable of pollution control. Prevention of marine pollution is also regulated by the International Convention for the Prevention of Pollution from the Ships (MARPOL 73/78). Estonia has become a party to the International Oil Pollution Compensation Fund (IOPC) of 1971 and its protocol of 1992.

In the case of dangerous freight, Estonia follows “The Agreement on Dangerous Goods by Road (ADR),” “The European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways (AND),” “The International Maritime Dangerous Goods (IMDG) Code,” Annex “Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID)” to the Convention Concerning International Carriage by Rail of 1980 and the requirements of the Agreement on International Goods Transport by Rail (SMGS). Requirements for export and import of dangerous chemicals have been specified in Regulation no. 304/2003/EC of the European Parliament and of the Council (OJ L 063, 6.3.2003).



## Annex 4. Abbreviations

ADN –	European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR –	Agreement on Dangerous Goods by Road
CDPCA –	Communicable Disease Prevention and Control Act
CVL –	Central Virology Laboratory
EC –	European Commission
ECDC –	European Centre for Disease Prevention and Control
EDACS –	Enhanced Digital Access Communications System
EISS –	European Influenza Surveillance Scheme
EPA –	Emergency Preparedness Act
ERDF –	European Regional Development Fund
EU –	European Union
EWRS –	Early Warning and Response System
HB –	Healthcare Board
HELCOM –	Helsinki Commission, a body for achieving objectives of the Convention on the Protection of the Marine Environment of the Baltic Sea Area
HPI –	Health Protection Inspectorate
IADCA –	Infectious Animal Disease Control Act
IHR –	International Health Regulations
IMDG code –	International Maritime Dangerous Goods Code
IMO –	International Maritime Organisation
IOPC Fund –	International Oil Pollution Compensation Fund
ITOPF –	International Tanker Owner Pollution Federation
MARPOL –	International Convention for the Prevention of Pollution from Ships
OIE –	World Organisation for Animal Health/Office International des Epizooties
PRPG –	Health Preparedness and Response Planning Group
PSSA –	Particularly Sensitive Sea Area
RAS-BICHAT –	Rapid Alert System on Biological and Chemical Agents Attacks
RID –	Regulations Concerning the International Carriage of Dangerous Goods by Rail
SARS –	severe acute respiratory syndrome
VFB –	Veterinary and Food Board
VFL –	Veterinary and Food Laboratory
WHO –	World Health Organization

## Annex 5. Analysed Legal Acts

### Legal Acts

- **Merchant Shipping Code**
- **Rescue Act**
- **Water Act**
- **State Borders Act**
- **Border Guard Act**
- **Convention on the Protection of the Marine Environment of the Baltic Sea Area Ratification Act**
- **Emergency Situation Act**
- **State of Emergency Act**
- **Ports Act**
- **Chemicals Act**
- **Infectious Animal Disease Control Act**
- **Veterinary Activities Organisation Act**
- **Road Transport Act**
- **Emergency Preparedness Act**
- **Health Services Organisation Act**
- **Maritime Safety Act**
- **Railways Act**
- **Communicable Disease Prevention and Control Act**
- **Veterinary Supervision over Trade in, Import and Export of Animals and Animal Products Act**
- **Public Health Act**

### Regulations

- Government of the Republic Regulation No. 83 “**Approval of Legal Acts Derived of the Convention on the Protection of the Marine Environment of the Baltic Sea Area**” of 15 March 1996.
- Government of the Republic Regulation No. 393 “**Establishing the List of Especially Dangerous Animal Diseases**” of 21 December 1999.
- Government of the Republic Regulation No. 260 “**The Conditions and the Procedure for Compensation of Costs Incurred in Prevention and Control of Especially Dangerous Animal Diseases**” of 1 August 2000.
- Government of the Republic Regulation No. 305 “**Setting an Order in Marine Pollution Detection and Control Responsibilities**” of 20 September 2000.
- Government of the Republic Regulation No. 243 “**List of Officials for whom Crisis Management Training Events have to be Conducted**” of 17 July 2001.
- Government of the Republic Regulation No. 312 “**Approval of the Statutes, Members and Chairman of the Government Crisis Management Committee**” of 2 October 2001.
- Government of the Republic Regulation No. 44 “**Procedure for Cooperation between Ambulance Service, Hospitals, Rescue Agencies and Police Agencies as Regards Emergency Aid**” of 23 January 2002.
- Government of the Republic Regulation No. 55 “**Statutes of the Government Security Committee**” of 25 January 2002.
- Government of the Republic regulation No. 166 “**The Procedure for Reporting an Emergency and Requirements for the Information Provided**” of 20 May 2002.
- Government of the Republic Regulation No. 222 “**Healthcare Arrangements in Emergency Situations**” of 10 July 2002.

- Government of the Republic Regulation No. 237 **“Procedure for Search and Rescue Activities, including Marine Pollution Detection and Control, in the Internal and Territorial Waters and the Exclusive Economic Zone of Estonia as well as on Lake Peipus, Lake Lämmijärv and Lake Pihkva”** of 23 July 2002.
- Government of the Republic Regulation No. 245 **“The Procedure for Participation of the Defence Forces in Rescue and Emergency Work”** of 26 September 2003.
- Government of the Republic Regulation No. 281 **“Requirements and Procedure for International Cooperation and Notification on Communicable Disease Control”** of 13 November 2003.
- Government of the Republic Regulation No. 297 **“The Procedure for Forwarding Information on Incidence of Communicable Diseases and their Risk Factors and the List of Data to be Forwarded”** of 27 November 2003.
- Government of the Republic Regulation No. 298 **“Procedure and Conditions for Stopping the Spread of Especially Dangerous Communicable Diseases on Estonian Borders”** of 27 November 2003.
- Government of the Republic Regulation No. 185 **“Statutes of the Ministry of the Interior”** of 11 May 2004.
- Minister of the Environment No. 89 **“Statutes of the Environmental Inspectorate”** of 31. December 2003.
- Minister of the Environment Regulation No. 93 **“Intervention and Response Levels and Emergency Radiation Limits for Radiation Emergencies”** of 14 July 2004.
- Minister of Agriculture Regulation No. 34 **“Approval of the List of Infectious Animal Diseases Subject to Notification and Registration”** of 25 November 1999.
- Minister of Agriculture Regulation No. 5 **“The Requirements for the Form and Content of the Notice Submitted by Laboratories upon Suspicion or Diagnosing of an Infectious Animal Disease which is Subject to Notification and Registration and the Submittal Procedure”** of 18 February 2000.
- Minister of Agriculture Regulation No. 41 **“Bird Flue Control Regulations”** of 11 April 2003.
- Minister of Agriculture Regulation No. 74 **“Requirements for Application of Prophylactic Quarantine of Animals and for Quarantine Centres”** of 27 April 2004.
- Minister of Agriculture Regulation No. 85. **“The Procedure for Veterinary Inspection at the Place of Destination and at Border Inspection Points”** of 7 May 2004.
- Minister of Agriculture Regulation No. 173 **“The Procedure for Financing the Prevention and Control of Infectious Animal Diseases not Included in the List of Especially Dangerous Infectious Animal Diseases”** of 29 October 2004.
- Minister of Agriculture Regulation No. 55 **“Veterinary Requirements for Animal Products and their Handling, including Trade”** of 13 May 2005.
- Minister of Agriculture Regulation No. 67 **“Veterinary Requirements for Imported Animals and Animal Products”** of 5 June 2006.
- Minister of the Interior Regulation No. 55 **“The Procedure for Preparation and Submission of Data Sheets, Safety Reports and Contingency Plans in Dangerous Enterprises and Enterprises Liable to be Affected by a Major Accident and Maintenance of a List of Enterprises Liable to be Affected by a Major Accident”** of 12 May 2003.
- Minister of the Interior Regulation No. 74 **“Statutes of the Rescue Board”** of 23 December 2004.
- Minister of Social Affairs Regulation No. 156 **“Health Protection Requirements for Storing, Transporting, Burying and Reburying of Corpses”** of 28 December 2001.
- Ministry of Social Affairs Regulation No. 113 **“The Procedure for Acquiring, Distribution, Storing and Transporting Vaccines and Immunoglobulins, and for the Functioning of the Cold Chain”** of 7 October 2003.

- Minister of Social Affairs Regulation No. 116 “**Requirements for Inoculation Arrangements**” of 31 October 2003.
- Minister of Social Affairs Regulation No. 117 “**The Measures for Surveillance, Prevention and Control of Nosocomial Infections and the Procedure for Communicating the Corresponding Information; the Procedure for Informing the Health Protection Inspectorate of the Findings of Laboratory Surveillance of Nosocomial Infections and Test Findings Concerning the Drug Resistance of Microbes, as Carried out by Microbiology and Virology Laboratories**” of 31 October 2003.
- Ministry of Social Affairs Regulation No. 119 “**The Procedure for Handling Infectious Material**” of 31 October 2003.
- Minister of Social Affairs Regulation No. 120 “**The Procedure for Making Decisions on Involuntary Treatment of Persons Suffering from a Communicable Disease**” of 31 October 2003.
- Minister of Social Affairs Regulation No. 123 “**Requirements for the Control of Communicable Diseases**” of 31 October 2003.
- Minister of Social Affairs Regulation No. 126 “**Quarantine Requirements and their Surveillance Procedure**” of 10 November 2003.
- Minister of Social Affairs Regulation No. 122 “**The Procedure for Identification, Classification, Packaging and Marking of Dangerous Chemicals**” of 3 December 2004.
- Minister of Transport and Communications Regulation No. 106 “**Requirements for Storage Facilities for and Places of Loading, Unloading and Transshipment of Chemicals, and for Other Structures Necessary for Handling of Chemicals in Ports, Road Transport Terminals, Railway Stations and Airports and Special Requirements for handling Ammonium Nitrate**” of 6 December 2000.
- Minister of Transport and Communications Regulation No. 118 “**Regulations for Road Transport of Dangerous Freight**” of 14 December 2001.
- Minister of Economic Affairs and Communications Regulation No. 55 “**Requirements for Transport Equipment**” of 3 April 2003.
- Minister of Economic Affairs and Communications Regulation No. 89 “**The Procedure for Informing about Dangerous Cargo, the List of Data to be Submitted and the Procedure for Submitting Information on Dangerous Cargo to Interested Parties**” of 10 August 2005.

#### Orders

- Government of the Republic Order No. 618-k “**Approval of the National Crisis Management Plan**” of 17 September 2002, amended at the government meeting on 1 February 2007.
- Government of the Republic Order No. 738 “**Setting Up an Interministerial Committee for Coordinating the Solution of Maritime, Marine Protection and Pollution Control Issues**” of 12 December 2005.
- Government of the Republic Order No. 251 “**Approval of the Summary of Risk Assessments of Estonian Ministries 2005**” of 27 April 2006.

#### Directives

- Minister of the Environment Directive No. 652 “**Establishing the Crisis Management Team of the Ministry of the Environment, its Rules of Procedure and the Summoning Procedure**” of 17 September 2003.
- Minister of the Environment Directive No. 134 “**Amending the Procedure for Establishing the Crisis Management Team of the Ministry of the Environment, its Rules of Procedure and the Summoning Procedure**” of 6 February 2006.

- Secretary-General of the Ministry of Economic Affairs and Communications Directive No. 52 “**Approval of the Duties, Summoning Procedure and Rules of Procedure of the Crisis Management Team**” of 30 October 2003.
- Minister of Economic Affairs and Communications Directive No. 206 “**Crisis Management Team of the Ministry and Determination of Crisis Regulation Tasks**” of 18 June 2004.
- Minister of the Interior Directive No. 117 “**Establishing the Crisis Management Team of the Ministry of the Interior, its Rules of Procedure and the Summoning Procedure**” of 15 March 2002.
- Minister of the Interior Directive No. 102 “**Schedule of County Complex Exercises up to 2005**” of 11 March 2003.
- Minister of the Interior Directive No. 514 “**Pollution Control Plan of the Border Guard Administration**” of 24 November 2003.
- Minister of the Interior Directive No. 31 “**Risk Assessment for Emergencies in the Area of Government of the Ministry of the Interior 2005**” of 19 January 2006.
- Minister of Social Affairs Directive “**Establishing the Crisis Management Team, its Rules of Procedure and the Summoning Procedure**” of September 2003.
- Minister of Agriculture Directive No. 300 “**Establishing the Crisis Management Team, its Rules of Procedure and the Summoning Procedure**” of 19 December 2005.

#### Pans/summaries and methodological materials

- **The National Security Concept of the Republic of Estonia (2004)**
- **Development Plan for the Rescue Service 2005–2009**
- **Development Plan for the Operation Supplies Based State Reserve up to 2006**, approved at the government cabinet meeting on 18 November 2004
- **Summary of Risk Assessments of Estonian Ministries 2004**, approved at the government cabinet meeting on 3 March 2005
- **Action Plan for Better Organisation of Marine Environment Protection 2005–2007**, approved at the government meeting on 31 March 2005
- **Risk assessment Methodology for Counties, Rural Municipalities and Cities, Minister of the Interior Regulation No. 78 of 26 June 2001**
- **The Principles and Schedule for Establishing a Crisis Management Team of the Ministry and its Rules of Procedure**, Government Crisis Management Committee Decision No. 9 of 22 May 2003
- **General Principles and Schedule for Contingency Plans for Emergencies which May Occur in the Area of Government of the Ministry**, approved by Government Crisis Committee on 19 April 2004
- **Risk Assessment Schedule and Methodology of the Ministry 2005**, Government Crisis Committee Decision No. 11 of 15 June 2005
- **Methodical Aids for Preparing County Crisis Management Plans**
- **Summary of Risk Assessments of Estonian Ministries and Counties 2005**, approved at the Government Crisis Committee meeting on 22 February 2006 and at the government cabinet meeting on 30 March 2006
- **Development Plan for the Area of Government of the Ministry of the Interior 2007–2010**, approved by Minister of the Interior Directive No. 113 of 14 March 2006
- **National Infectious Animal Disease Control Programme 2006**, approved by the General Director of VFB Directive No. 59 of 3 February 2006
- **Marine Concept of the Border Guard Administration**, approved by the General Director of the Border Guard Administration on 20 December 2006
- **National Oil Spill Contingency Plan**, the principles of which were noted at the government cabinet meeting on 11 January 2007

## Annex 6. List of Interviewees

### **The Ministry of Agriculture and its area of government**

The interviews were conducted during the time period from 15 May 2006 to 7 June 2006.

- |                   |  |
|-------------------|--|
| 1. Ants Noot      | Secretary-General of the Ministry of Agriculture                     |
| 2. Roland Türner  | Substitute Head of Administrative Department                         |
| 3. Riina Velleste | Deputy Head of Administrative Department                             |
| 4. Mari Hõbemäe   | Substitute Advisor of Administrative Department                      |
| 5. Ago Pärtel     | Director General of the Veterinary and Food Board                    |
| 6. Olev Kalda     | Substitute Director General  |
| 7. Enel Niin      | Head of Animal Health and Animal Protection Department               |
| 8. Olev Peetsu    | Director of Central Laboratory of the Veterinary and Food Laboratory |
| 9. Külli Tisler   | Deputy Director/Quality Manager                                      |
| 10. Imbi Nurmoja  | Deputy Director for Animal Diseases                                  |
| 11. Allan Mets    | Manager of Tallinn Veterinary and Food Laboratory                    |

### **The Ministry of Economic Affairs and Communications and its area of government; Estonian Railways Ltd.**

The interviews were conducted during the time period from 20 April 2006 to 10 May 2006.

- |                     |  |
|---------------------|--|
| 1. Andres Tint      | Deputy Secretary-General of Ministry of Economic Affairs and Communications                                  |
| 2. Nathan Tönnisson | Deputy Secretary-General   |
| 3. Ain Tatter       | Head of the Road and Railways Department   |
| 4. Tõnis Lepp       | Deputy Head of Aviation and Maritime Department  |
| 5. Tiit Põder       | Chief Specialist of Aviation and Maritime Department   |
| 6. Mati Iila        | Counsellor of Emergency Management Department  |
| 7. Tõnu Ader        | Chief Specialist of Emergency Management Department  |
| 8. Jüri Olde        | Chief Specialist of Emergency Management Department  |
| 9. Andrus Maide     | Director General of the Maritime Administration  |
| 10. Ain Randi       | Work Environment Specialist  |
| 11. Are Piel        | Head of Vessel Traffic Department  |
| 12. Riho Sõrmus     | Director General of the Road Administration  |
| 13. Koit Tsefels    | Deputy Director General  |
| 14. Jüri-Karl Seim  | Director General of Railway Inspectorate   |
| 15. Margus Meius    | Substitute Head of Railway Traffic and Railway Rolling Stock Surveillance Service                            |
| 16. Marius Kupper   | Chief Specialist of Risk Assessment and Crisis Management of the Safety Department of Estonian railways Ltd. |

### **The Ministry of the Interior and its area of government**

The interviews were conducted during the time period from 12 April 2006 to 13 June 2006.

- |                         |  |
|-------------------------|--|
| 1. Kalev Timberg        | Deputy Secretary-General for Internal Security |
| 2. Raine Eenma          | Head of the Crisis Management Bureau           |
| 3. Kevin Probert-Ehaver | Counsellor of the Crisis Management Department |
| 4. Tuuli Tang           | Counsellor of the Crisis Management Department |
| 5. Jaana Aduson         | Counsellor of the Crisis Management Department |
| 6. Toomas Kasemaa       | Head of the Border Guard Policy Bureau         |
| 7. Mati Raidma          | Director General of the Rescue Board           |
| 8. Alo Tammsalu         | Deputy Director General                        |

- |                   |  |
|-------------------|--|
| 9. Jaan Tross     | Head of the Crisis Management Centre                         |
| 10. Roland Peets  | Director General of the Border Guard Administration          |
| 11. Ants Ojasoo   | Senior Officer of the Borders Department                     |
| 12. Silver Vahtra | Chief of the Pollution Control Unit of the Marine Department |

### **The Ministry of the Environment and its area of government**

The interviews were conducted during the time period from 8 May 2006 to 12 May 2006.

- |                     |  |
|---------------------|--|
| 1. Olavi Tammemäe   | Assistant Minister of the Ministry of the Environment                |
| 2. Harry Liiv       | Deputy Secretary-General for Environmental Management                |
| 3. Rein Raudsep     | Head of the Environmental Management and Technology Department       |
| 4. Viktor Grigorjev | Counsellor of the Environmental Management and Technology Department |
| 5. Olev Luhtein     | Counsellor of the Water Department                                   |
| 6. Ain Purga        | Director General of the Environmental Inspectorate                   |
| 7. Heiki Nurmsalu   | Substitute Director General  |

### **The Ministry of Social Affairs and its area of government, Tartu University Clinics Foundation and WHO Estonia**

The interviews were conducted during the time period from 18 May 2006 to 5 June 2006.

- |                      |   |
|----------------------|---|
| 1. Maarja Mändmaa    | Secretary-General of Ministry of the Social Affairs                         |
| 2. Ivi Normet        | Deputy Secretary-General for Healthcare                                     |
| 3. Heli Paluste      | Health Policy Manager of the Healthcare Department                          |
| 4. Martin Kadai      | Chief Specialist of the Public Health Department                            |
| 5. Triin Raag        | Chief Specialist of the Welfare Department                                  |
| 6. Üllar Kaljumäe    | Director General of the Healthcare Board                                    |
| 7. Marek Seer        | Head of the Emergency Medicine Department                                   |
| 8. Mihkel Tamme      | Head of the Disaster Medicine Department                                    |
| 9. Tiiu Aro          | Director General of the Health Protection Inspectorate                      |
| 10. Mihhail Muzõtšin | Deputy Director General   |
| 11. Kuulo Kutsar     | Epidemiology Counsellor   |
| 12. Inna Sarv        | Head of the Central Virology Laboratory                                     |
| 13. Jarno Habicht    | Representative of the WHO in Estonia  |
| 14. Ago Kõrgvee      | Director of the Anaesthesiology and Intensive Care Clinic of the UT Clinics |

The national Audit Office thanks the auditees and the experts who participated in the audit for their pleasant cooperation.