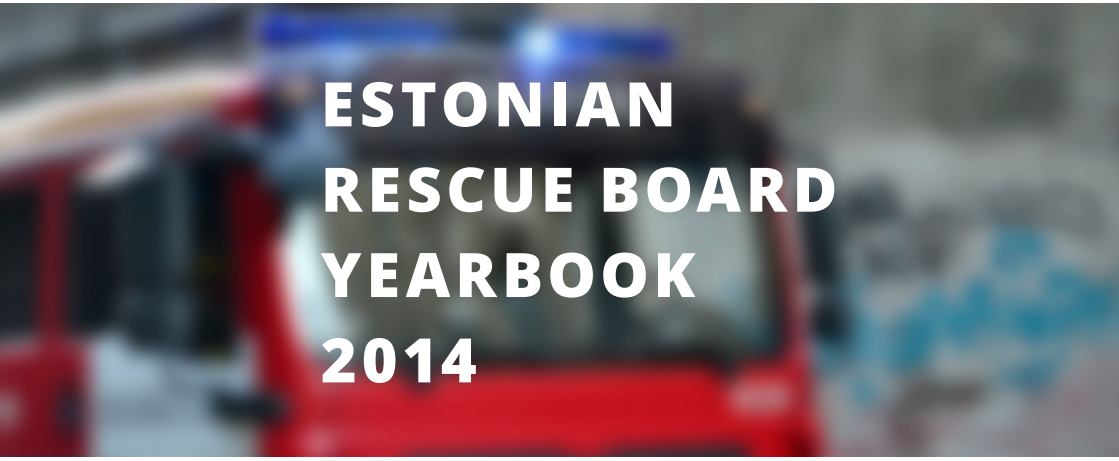


ESTONIAN RESCUE BOARD YEARBOOK 2014

ESTONIAN RESCUE BOARD
YEARBOOK 2014

ESTONIAN RESCUE BOARD YEARBOOK 2014

TABLE OF CONTENTS

Foreword **4**

Preface **6**

1. Estonian Rescue Board **8**
1.1 Structure of the Estonian Rescue Board 8
1.2 Organizational development in 2014 10
1.3 Rescue Centres 11

2. Strategic goals and how to achieve them **13**

3. Key area objectives and their implementation **20**
3.1 Prevention 20
3.2 Fire safety supervision 24
3.3 Crisis management 29
3.4 Rescue operations 32
3.5 Explosive ordnance disposal 41

Glossary of abbreviations and acronyms **46**

Dear reader,

Estonian Rescue Board is the most trusted organization in Estonia in 2014, according to the market research conducted by Turu-uuringute AS. Research shows that Estonian Rescue Board is supported by 96% of the population. This level of trust has not been easy to earn - it has been the result of consistent and focused effort. We know and realize that if we want people to trust us and our services, we have to trust ourselves and also be ready to share the trust.

Every employee's mission at the Estonian Rescue Board is to ensure the safety of people living in Estonia. All of the employees of the organization work daily towards the safety of Estonian people. To achieve this, everyone has to know and fulfil their part in providing safety. "Everyone" in this context means people, companies, local governments and government offices, volunteers, foreign partners and employees of the Rescue Board. The key is for people to care for each other more, for them to be more observant and helpful. So that when someone is in trouble, we would not look helplessly at each other asking why someone is not doing anything, but we would actually have the courage to lend a helping hand.

We see today that a lot of problems people face are brought on by having insufficient resources and therefore the need arises to carve clear co-operation pathways with social assistance domains and local governments. The awareness and behaviour of those at risk of having a fire is difficult to change and therefore new risk management solutions have to be found in making the environment safer.

The current national security situation combined with the risks brought on by climate change call for a more focused attention towards protecting the population. We need a clear and concise system and the resources to relocate the population upon need and to ensure their everyday and primary needs are met once having been relocated. More attention has to be given to raising people's risk-awareness and their ability to cope on their own in a state of emergency.

The Estonian Rescue Board Yearbook 2014 concentrates important information on the Rescue Board's structure, services, strategic goals and their level of fulfilment in 2014. It is an important starting point in planning next steps to achieve better results through identifying the problems that need to be solved. I wish all of us luck in doing this!

Kuno Tammearu,
Director General,
Estonian Rescue Board

PREFACE

The Estonian Rescue Board is governed by the Ministry of the Interior and it is the organization that shapes and maintains a safe living environment in Estonia; prevents danger and helps people in an emergency in a fast and professional manner. Estonian Rescue Board employs 2232 people, making it the third largest public sector employer in Estonia.

Estonian Rescue Board was created on May 25, 1992 when the government of the Republic of Estonia issued a regulation dismissing the National Fire Service and transferring all their assets and functions to the National Rescue Board. However, legally the Rescue Board was formed more than half a year before the abovementioned date. Still the date is important, since that is when the merging of civil or population protection structures with the task of managing firefighting and rescue services took place. Over the course of a couple of decades there have been a number of changes in the Rescue Board. An organization that was initially governed locally, having the National Rescue Board shape the framework, has grown into a solid organization that provides services through four regional centres.

The mission of the Estonian Rescue Board:

**We prevent accidents,
save lives, property and the environment.**

The values of the Estonian Rescue Board:

**HELPFULNESS -
we notice and assist people in need of help.
COURAGE -
we have the courage to decide, act and take responsability.
TRUST -
we trust and we are trusted.**

The vision 2025 of the Estonian Rescue Board:

**Together we have reduced accidents and losses
to the level seen in Nordic countries.**

ESTONIAN RESCUE BOARD

1.1 Structure of the Estonian Rescue Board

The Estonian Rescue Board is managed by the director-general, who has three deputies that manage different domains. The director-general also supervises the work of four Regional Rescue Centre managers, who ensure that key functions are being provided regionally.

Estonian Rescue Board has departments that develop, plan and manage activities and also rescue centres and the Explosive Ordnance Disposal Centre that carry out activities. Estonian Rescue Board has operated based on service-driven management since 2008 and its whole area of responsibility has been described as services from the standpoint of the needs of the target group. As of 2014, Estonian Rescue Board has 33 public services and 28 internal services.

Deputy director-general of prevention is in charge of the following departments: fire safety supervision; prevention; crisis management; communication and the Estonian Firefighting Museum.

Deputy director-general of rescue is in charge of the following departments: rescue work; Explosive Ordnance Disposal Centre and the coordinator of voluntary rescuers outside of the structural unit.

Deputy director-general of administration is in charge of the following departments: development; administration; human resources management; financial; legal; and the information safety advisor. Offices outside the structural unit grid that deal with international co-operation and internal audits are also under the direct management of the Estonian Rescue Board's director-general (figure 1).

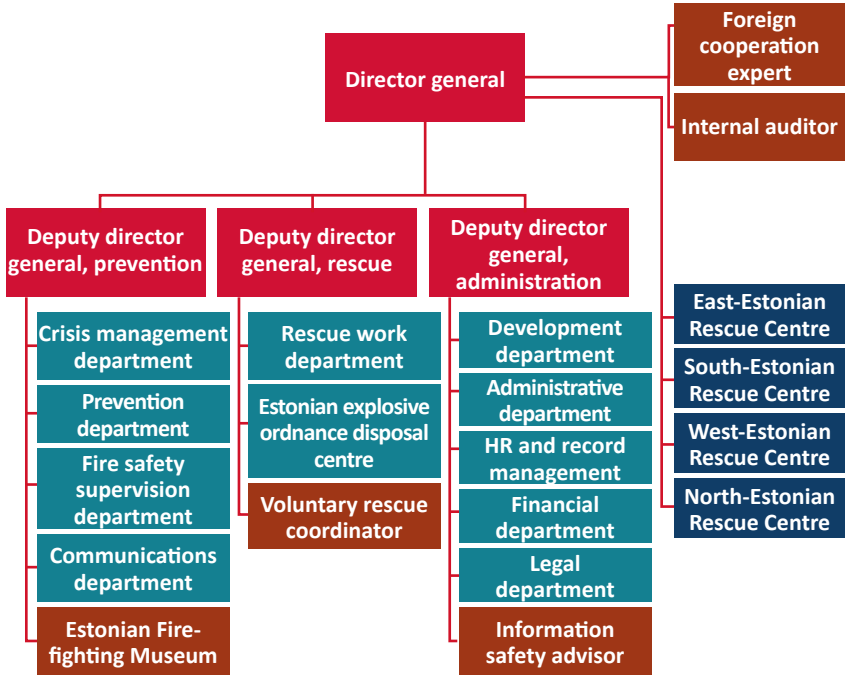


Figure 1. Structure of the Estonian Rescue Board

1.2 Organizational development in 2014

Strategy of the Estonian Rescue Board 2015-2025 was finalized in 2014. The compiling of the strategy took the whole previous year and the process involved many partners and employees of the Rescue Board. Also, the mission, vision and values of the Rescue Board got new wording in the process. Estonian Rescue Board's strategy was published as a publication in Estonian, English and Russian. Five main pathways to achieve strategic goals were specified – continued focus on prevention, increasing the level of partnerships, using technology, analysis-based planning and increasing the organizational capacity. New strategy saw the emergence of a new yearly work plan outline in order to ensure the cohesiveness of short-term and long-term plans. The strategy was introduced in the fall at the conference "Rescue Board 2025 – safety built by everyone!"

Service-based management model was developed through a year-long series of workshops across the domain of the Ministry of the Interior, which resulted in drafting a common service-based management framework. The new procedure is more specific than the old one, creating a clearer base in planning services based on the needs of the target group. The procedure also started the preparation of renewing services and defining goals. The quality control and evaluation of services in the Estonian Rescue Board was also analysed and the integral quality management model and its operational programme for 2015 was devised.

Core area framework of responsibility was also mapped out to define the jurisdictions of the Estonian Rescue Board management system and its structural units and regulate the division of tasks between them. 16 processes were analysed to determine specific responsibilities and corresponding process outlines were drawn up as a result.

Voluntary personnel turnover of Estonian Rescue Board in 2014 was 4.3% and overall turnover was 7.3%, turnover among public safety officers was 3.8% and 6.2%, respectively. The gross monthly salary of the year 2014 according to Statistics Estonia in public administration and national defence was 1219 euros on average. The average remuneration of the Estonian Rescue Board was 963 euros, accounting for 79% of the average salary paid in the public administration and national defence sector.

To achieve better communication, a new Estonian Rescue Board website was launched: **www.paasteamet.ee**. Also the social media was engaged as a way of transmitting messages. The fan base of the Estonian Rescue Board Facebook page (**www.facebook.com/paasteamet**) increased to a total of 32 425 people, bringing the Estonian Rescue Board to 52nd position in the list of Estonian institutions and companies and outranking the closest public sector institution by almost 10 000 followers.

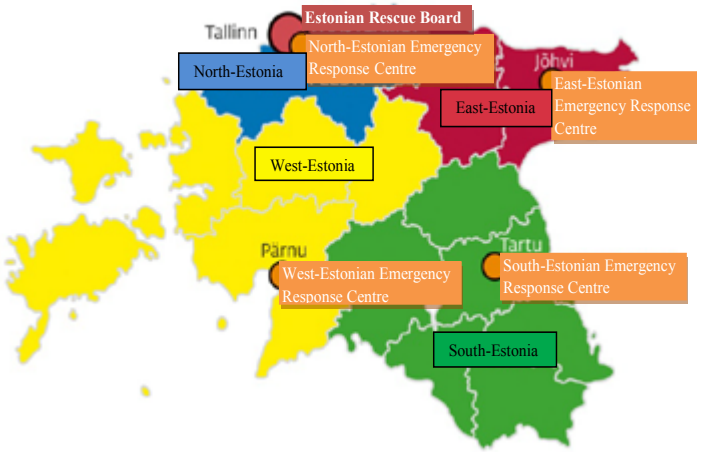
1.3 Rescue Centres

North-Estonian Rescue Centre covers Harju County with a population of 572 103 in 2014. This region of operations of the Estonian Rescue Board had 13 professional and 23 volunteer fire stations. There were 692 building fires in this jurisdiction in 2014. 18 lives were lost in fires and 19 people got injured. There were 3.2 fatalities caused by fire per 100 000 residents. 15 people died in water-related accidents (2.6 fatalities per 100 000 residents).

East-Estonian Rescue Centre covers the counties of Ida-Viru and Lääne-Viru with a total population of 209 066 in 2014. This region of operations of the Estonian Rescue Board had 11 professional and 17 volunteer fire stations. There were 436 building fires in this jurisdiction in 2014. Fires resulted in the death of 10 people and the number of injured was also 10. There were 4.8 fatalities caused by fire per 100 000 residents. 11 people died in water-related accidents (5.3 fatalities per 100 000 residents).

South-Estonian Rescue Centre covers the following counties: Tartu, Põlva, Jõgeva, Võru, Viljandi and Valga County with a total population of 322 052 people in 2014. This region of operations of the Estonian Rescue Board had 22 professional and 27 volunteer fire stations. There were 416 building fires in this jurisdiction in 2014. 17 people died as a result of a fire and 21 people got injured. The rate of fatalities caused by fire per 100 000 population was 5.3. 24 people died in water-related accidents (7.5 fatalities per 100 000 residents).

West-Estonian Rescue Centre covers the following counties: Pärnu, Rapla, Hiiu, Saare, Lääne and Järva counties with a total combined population of 212 598 people in 2014. This region of operations of the Estonian Rescue Board had 26 professional and 43 volunteer fire stations. There were 289 building fires in this jurisdiction in 2014. 9 people died as a result of a fire and 10 people got injured. The rate of fatalities caused by fire per 100 000 residents was 4.2. 17 people died in water-related accidents (8.0 fatalities per 100 000 residents) (map 1).



Map 1. Estonian Rescue Board and Regional Rescue Centres

2

STRATEGIC GOALS AND HOW TO ACHIEVE THEM

Estonian Rescue Board aims to achieve the level of safety indicators common to the Nordic countries within 10 years. All in all, achieving the vision means that we have fewer accidents and less damage in the future, the people that use our services are satisfied, preventive awareness has risen and more partners have been involved in ensuring safety and there is more co-operation. For this to happen, however, we need to focus and use our resources more effectively.

There were 6870 fires in 2014, which is 20% (+1125) more than in 2013 during the same time period. The last time the rate of fires was so high in 2009. This increase is mainly due to the significant rise in the number of forest and wild fires. Building fires increased in numbers by 13 % to 1833 (2013 – 1627) compared to the previous year. Half of the building fires (50%) took place in residential buildings: 922 (2013 – 892) (table 1).

The number of fires in non-residential buildings increased by 24% compared to the year 2013. However, the percentage of fires in non-residential buildings stayed the same as in 2013 (13% of total building fires). There were 738 fires started by ignoring of fire safety rules in non-residential buildings; the percentage of fires resulting from ignoring fire safety rules in the total number of building fires has gone down.

Type of emergency	2010	2011	2012	2013	2014
Residential buildings	1168	1156	1155	892	922
Other buildings	792	784	742	735	911
Forest fires	30	24	18	13	99
Wildfires	1424	1188	672	1263	2318
Garbage, bonfires, barbeque	1530	1681	1 424	1874	1819
Motor vehicles	339	421	414	420	403
Other fires	1156	1 067	548	548	398
Raising awareness by rescue team on scene, where there was no uncontrollable fire	370	373	484	511	485
False call to a fire	2443	2105	1741	1586	2222
Total FIRE incidents	6439	6321	4973	5745	6870

Table 1. Types of fires in 2010-2014

40 fires claimed the lives of 54 people in 2014. The number of casualties increased by 7 compared to 2013, matching the total number of fire deaths in 2012. However, the number of fires that resulted in death decreased from 42 to 40 (figure 2). The average number of fatalities caused by fire

within the last three years decreased from 58 to 52. 4.1 people died from fires per 100 000 residents in 2014 (2013 – 3.6).

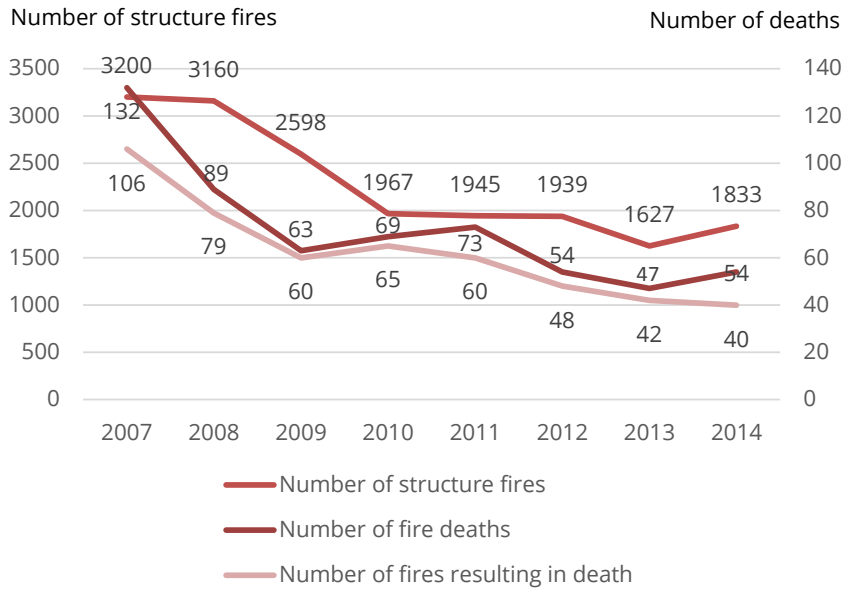


Figure 2. Number of fire deaths, number of fires resulting in death and building fires in 2007 – 2014

Increased awareness should be raised about the risks of smoking and using different heating systems. The number of building fires caused by smoking was 140. The number of building fires caused by smoking went down by 8 cases when compared to 148 in 2013. 19 people died in fires that were caused by a cigarette (2013 – 22) – a number that is in decline. The number of fires caused by heating systems was 241, which means the increase by 16.5% when compared to 2013 (2013 – 207) (table 2, figure 3).

Cause of the fire	2010	2011	2012	2013	2014
Using open flame	447	569	517	493	551
Smoking	251	247	174	148	140
Hot work	78	86	64	48	40
Using electrical appliances	55	35	44	32	31
Using heating systems	152	104	117	83	86
Ignited soot in the chimney flue	110	83	108	74	84
Cooking	72	44	90	20	39
Technological process	12	11	14	17	15
Storage of self-combusting agents and materials	14	18	12	10	10
Children playing with fire	53	38	23	22	34
Incorrect installation of a device or system	55	69	64	81	75
Lack of knowledge	13	13	12	11	15
Arson	127	135	128	128	155
Wildfire	2	2	2	3	5
Lightning strike, fireball	48	20	9	21	22
Technical device malfunctions	36	30	28	25	24
Electrical device malfunctions	151	130	81	89	97
Electrical installation malfunctions	168	182	186	137	141
Heating systems malfunctions	91	68	73	49	71
Motor vehicle electrical and fuel system malfunctions	12	14	6	11	6
Sparks from mufflers and other devices	9	8	13	13	10
Unknown causes	51	78	103	112	140
Other negligence	-	-	36	-	42
Total	2007	1984	1904	1627	1833

Table 2. Causes of building fires 2010-2014*

* Methodology was changed in 2013, years 2010-2012 are calculated based on the previous methodology.

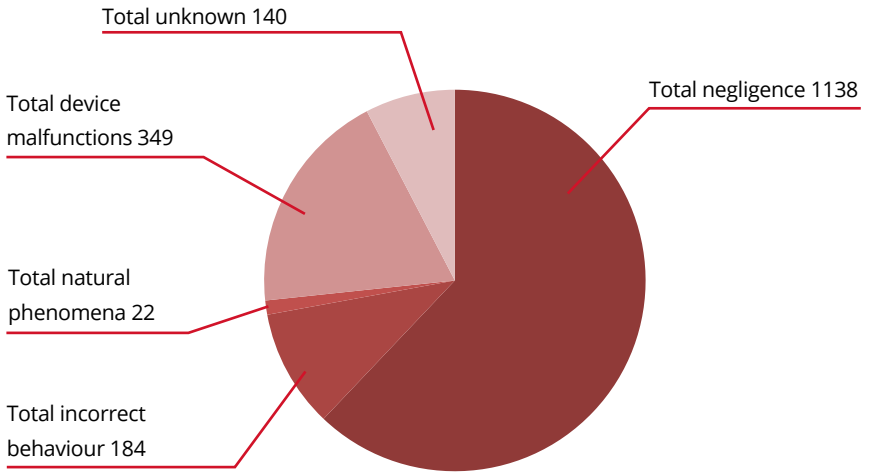


Figure 3. Causes of building fires (in numbers) in 2014.

68 people died **in water-related accidents** in 2014 (56 people in 2013). The average of the past three years increased from 57 deaths to 59 deaths. There were 46 fatalities due to drowning in inland waters in 2014 and 36 in 2013 (table 3). The number of drownings in summer months remained roughly the same when compared to the previous year. Thus, the increase in drownings was due to increased number of water-related accidents during the cold months (mainly boating accidents and fishermen).

Location	2010	2011	2012	2013	2014
Sea	18	11	14	14	13
Lake	13	10	7	7	18
River	26	16	11	15	15
Pond	19	6	10	15	6
Artificial lake	4	1	1	0	4
Reservoir	1	1	0	1	1
Quarry	7	4	3	0	4
Canal	1	0	1	2	0
Pool	1	1	1	0	3
Ditch	3	1	5	1	2
Well	3	4	1	1	1
Cellar	1	0	0	0	0
Bathtub	-	-	-	-	1
Total	97	55	54	56	68

Table 3. Fatalities caused by water-related accidents by incident location 2010-2014*

The number of members in **volunteer rescue** organisations increased from 1868 to 2005 (7 %) within a year. The number of certified voluntary rescuers increased by 21% - from 1281 to 1553. The number of voluntary rescuers with the right to conduct independent rescue services (level II certification) increased by 23%, reaching 1294 (2013- 1051). There were 109 (2013- 105) voluntary rescue stations providing rescue services on contract and three volunteer reserve rescue units (VRRU).

* Starting from 2014, the number of drowning deaths in bathtubs is also included in the total number drownings.

The average **response time of the first rescue team** (including volunteers) was 9 min 4 sec, improving the response time by over half a minute (36 sec) when compared to the previous year (2013 – 9 min 40 sec).

The average response time of rescue teams with life-saving capability to life-saving incidents such as structure fires, traffic and water accidents in total was 9 min 23 sec, having remained stable since the previous year (2013 – 9 min 20 sec). The response time of rescue teams with life- saving capability to building fires was 8 min 57 sec (2013 – 8 min 36 sec or + 21 sec), traffic accidents 10 min 17 sec (2013 – 10 min 28 sec or – 11 sec) and water accidents 10 min 1 sec (2013 – 12 min 44 sec or – 2 min 43 sec). The differences in response times are mainly due to the change in percentage of accidents in densely and sparsely populated areas.

The number of detonations of explosives or explosive devices was 5 (2013 – 8), which is 3 cases less than in 2013, bringing the three-year average number of explosions down from 9 to 6. As the case in the previous year, there were no fatalities; the number of injured people was 6 (2013 – 9). However, the three-year average number stayed the same– 6 (table 5).

3

KEY AREA OBJECTIVES AND THEIR ACHIEVEMENT

3.1 Prevention

The objective of prevention work is to shape an environment in Estonia, where every person creates and values safety and security. This, in turn, helps to reduce the number of emergencies and accident-related deaths and injuries and other related damages.

As of Dec. 31st 2014, there were 32 people dealing with prevention work. 361 volunteers were involved in prevention work on a contract basis during 2014 (2013 – 316). There are three types of services offered in terms of preventive work: informing, teaching and consulting.

2014 saw continued investment in preventive work, developing additional study materials, managing the preventive work of removal of explosives and water safety conducted by volunteers.

As a first, a customer satisfaction survey was conducted among 6th graders and high-school students asking for feedback on the quality of the training that was provided for them.

Two media campaigns were conducted within the framework of **prevention informing**: "Hero", which focused on water safety with the central slogan "Do not let your drunk friend into the water" and fire-safety based "Is your home fire-safe?", which invited people to take a web-based fire safety test for their home. The option to take a fire safety test both in Estonian and Russian was added to the website **www.kodutuleohutuks.ee**. The test was taken by people over 15 000 times. The visibility of the water safety campaign in the target group was 88%, the overall campaign visibility was 91% (902 128 people). A follow-up survey with the water safety campaigns increased the percentage of people who will prevent their impaired friend from going for a swim or taking a boat ride in any case to 65% (2013 - 52%).

35 safety awareness days (volunteers were involved during 18 of those events) and 313 information days (96 of those were carried out by volunteers) were conducted. Around 115 000 people took part in public events. 125 open days were led at rescue stations. A new position of a rescue councillor was created who answers safety-related questions on Facebook and on the website **www.kodutuleohutuks.ee** daily and both in Estonian and Russian.

Internet prevention pages ensured the access of safety-related information to the Russian-speaking population, taking into account the characteristics of their culture and language. Additionally, several different publications on home fire safety were published.

Prevention teaching saw 4.4% of the population (56 400 people) get safety-related training. Water-safety related study materials were developed and applied for intellectually challenged children. Middle school children (Grade 6) were the first to fill out a person-based knowledge test online. The test was solved over 5000 times.

56 400 people got different type of safety-related training (4.4% of population was involved (target rate was 4.2%)), incl:

1) Elderly (target: 1865, 2078 were trained);
2) Adults, including unemployed persons (target: 7200, 8263 were trained, incl. 1196 unemployed people);
3) Middle school pupils (target: 8100, 8421 were trained);
4) Primary and elementary school children (target: 24 470, 25 220 were trained);
5) Handicapped persons and support persons (target: 215, 354 were trained).

25 220 people received training from rescue teams and 6005 people were schooled by volunteers.

Water safety training was received by 2311 draftees (target 2500), 232 1st-3rd grade teachers (target 245), 888 adults (target 700) and 5793 youths between ages 16-18 (target 5955). A total of 17 691 people received water safety training in 2014 (2013- 17 291).

Prevention consulting service in 2014 involved 8725 safety-related consults to residential building managers (target: 8500), 7832 of which were conducted by rescue teams (target: 7580).

128 co-operation meetings were held, where 769 partners and key local government representatives received consulting services (target: 223). 107 additional meetings were held to provide consulting services to 1463 (target: 776) key people from educational, social and social welfare institutions.

An event connecting rescue volunteers, the 13th annual Volunteer Fire-fighter Forum *"Priitahtlike Pritsimeeste foorum"* was held.

86 volunteers received fire safety training and 46 volunteers received water safety training in 2014. Thereby the capacity of additional training and consulting within communities was increased.

3.2 Fire safety supervision

The objective of state fire safety supervision is to ensure the existence of proportional fire safety related technical regulations and the adhering to the fire safety rules and regulations; also the existence of unbiased information on the circumstances of a fire and its causes, being aimed at detecting risk situations ahead of time, preventing these situations and eliminating them.

108 people were working on fire safety supervision as of Dec. 31st, 2014. The department is providing four services: fire safety inspection service, the service of determining the cause of a fire, construction inspection service and product and service inspection service.

Fire safety inspection service is a service, where the object, activity or a device is inspected to see if it complies with the fire safety regulations. The selection of fire safety inspection subjects is risk-based, incl. based on the self-check analysis results of fire safety reports. Fire safety inspectors conducted 6138 fire safety inspections in 2014; residential buildings were inspected on 2429 occasions (target: 2000) and establishments and companies were inspected on 3709 occasions (target: 3000).

The number of fire safety inspections in residential buildings increased, 87% of inspected homes had a smoke detector installed as per regulations (2013 - 84%).

Estonian Rescue Board ensured the adherence to fire safety regulations after being issued a precept in 86% of cases in 2014 (target >75).

Those subjected to self-checking can file their reports electronically in a new online environment of fire safety self-check reporting

(at **https://tuleohutusaruanne.ee/**) that was developed in 2014, with the launch set for 2015.

The amendments to fire safety law reducing the percentage of misdemeanour procedures in the work of fire safety inspecting went into effect in 2015. Thereby the main focus has shifted to increasing fire safety through administrative proceedings. Additional plans include improving the risk-assessment methodology and analysis in greater involvement of the private sector in ensuring fire safety.

The service of determining the cause of a fire ensures that the post-fire proceedings are correctly carried out and that fire expert advice is provided to investigative bodies. The response time to fires to determine their cause was managed as a 24/7 proceeding surveillance, guaranteeing round the clock capacity in initiating fire proceedings and also response with expert advice in police investigations.

Officers from procedural bureaus conducted 322 misdemeanour procedures (2013 – 251), 277 administrative procedures (2013 – 218), provided expert advice to aid police investigations on 141 occasions (2013 – 230) and performed other administrative activities on 1865 occasions (2013 – 1479).

A new supervision information system JÄIS was launched in April 2014. Information from Rescue Service calls to structure fires is automatically transferred into JÄIS and officers supplement the data with information gathered from the scene across more than 70 fields.

The collaboration continued with Consumer Protection Board in ensuring the fire safety compliance of cigarettes, which in turn helps to reduce the number of fires. This time a test was conducted on the most common cigarette brand found on sites of fire – Paramount. It passed the test and was compliant to product regulations.

Methodology for a broader analysis of fire incidents was developed, also involving the causes of fire and evaluating the impact on administrational and constructional fire safety rules on fires.

The goal for 2015 is to raise the analysis capacity level and in order to implement the methodology, introduce a fire memo (in addition to fire death memo). This memo will be the basis of the planned annual seminar, where the needs of division of work are reassessed based on these memos. The development of information system JÄIS is also continued and the quality of entering data is improved.

Construction inspection service provides supervision in planning, designing and construction. This service saw the participation by technical bureau officials as follows:

- Planning – 659 (2013 – 626)
- Construction projects – 7573 (2013 – 7198)
- Participation in the authorisation for use commission – 3955 (2013 – 3491)

6 misdemeanour proceedings were conducted and 85 administrative proceedings were initiated (56 were completed), 18 precepts were issued. False alarm dispatches of automatic fire alarm reporting system (AFARS) were processed in 60 occasions. Engineering bureaus conducted 172 residential dwelling fire safety inspections (the number of planning, construction project and the authorisation for use proceedings increased by 7% within a year).

The qualification standards of people involved in construction expertise were regulated (fire safety expert, level 6) and first qualification certificates were issued.

Starting from 2014, the Estonian Rescue Board takes part in the work of the international workgroup "Fire Safe Use of Wood" that aims to find safe solutions for the more common use of wood.

2015 will see significant changes in the construction industry with the new Building Act coming into effect on July 1st, 2015, bringing about change to the construction officers working at Estonian Rescue Board as well. The current regulation 315 "Fire safety requirements for buildings and its parts" will also be changed in 2015, construction proceedings will be standardized in local governments and rescue centres and division or work will be changed based on the customer satisfaction survey in the field of construction.

Product and services compliance control will be conducted by the **product and services inspection** service. 10 misdemeanour proceedings were initiated in 2014 against companies providing maintenance to fire safety installations, 16 misdemeanour proceedings were initiated against persons responsible. Misdemeanour proceedings were also initiated against potters (4) and chimney sweepers (9).

AFARS investigations were carried out on 6 sites. False AFARS calls dispatches decreased by 5% when compared to 2013 (2013 – 4294, 2014 – 4 105). Items connected to the Emergency Centre were 1 218 in 2013 and 1214 in 2014. There were upon average of 3.5 false alarm dispatches per object in 2013; this number decreased to 3.4 in 2014. AFARS with Emergency Centre connectivity detected 79 (2013 – 52) actual fires. 401 AFARS installations were inspected in a year.

401 inspection activities were conducted to determine the compliance of fire safety installations and flammable installations.

Quality management system and measuring methods to measure linear measures were also developed in 2014.

Certification requirements were set for responsible persons in companies involved in fire safety (fire safety specialist, level 5); applicable motions to amend are being drafted with the cooperation of fire safety companies and the representatives of consumers, who use their services.

More collaboration with Estonian Security Association (ESA) is also planned for 2015. Estonian Rescue Board and ESA are in the process of drafting a mutual agreement which will, in concordance with the objectives of both the Estonian Rescue Board and ESA, lead to a higher standard in providing fire safety installation planning, construction and maintenance service.

A fire safety inspector checks fire alarm system.

3.3 Crisis management

The aim of crisis management is to ensure the preparedness of the country and its citizens to tackle emergency situations and the national capability in taking part in international crisis management.

24 people were employed in crisis management as of Dec. 31st 2014. There are four sub-areas of management in the crisis management system: risk management service, chemical safety service, emergency preparedness service and international crisis management service.

"Risk communication analysis" report was conducted in 2014, which was the basis of the action plan for 2015. The aim is to ensure a working risk communication in emergency situations and the accessibility of information on danger and code of conduct for the public.

A spatial planning guide and handbook were compiled as a part of the **risk management** service in 2014. Information sessions were also held to ensure risk-aware planning activities across Estonia that took into account both the Planning Act and the Chemicals Act.

Chemical safety service ensured the supervision of the Chemical Act in 63 enterprises liable to be affected by major accident and in 61 dangerous enterprises.

As per the Chemicals Act, 14 detailed plans (2013 – 25) and 58 (2013 – 25) construction projects were presented to rescue services for approval.

Dangerous substances database RESY-EST was updated, Land Board's map application (**http://xgis.maaamet.ee/xGIS/XGis**) was supplemented with the data on dangerous enterprises and the drafting

of the legal regulations related to taking over of Seveso III directive was also taken part in.

As a part of **emergency preparedness** service, 21 planned meetings of regional crisis management commissions took place in 2014 (2013 – 18). The preparedness of Estonian Rescue Board's crisis management working mediums (incl. headquarters) was ensured and five training exercises were conducted to verify it.

A local government training programme was initiated in 2014 (2014 – 2017) that covered general crisis management topics on its first year. The aim of the training programme is to ensure the counselling of local governments in the subject of crisis management and to develop their population protection capability by raising the awareness of local government leaders and officials in terms of managing vital services, preventing emergencies and planning and managing preparedness issues. Estonian Rescue Board's crisis management actions towards local governments were also analysed.

The international crisis management service plays an important part in ensuring collaboration between other countries and international organizations. This is brought upon by the threat of a major accident, where more than one country may be under threat. Possible examples are coastal pollution, forest fire or a flood.

Estonian opinion was represented in 2014 in concordance with the Ministry of the Interior in the following places: European Commission Civil Protection Committee (CPC), NATO Civil Protection Group (CPG), NATO Civil Emergency Planning Committee (CEPC), UN/OCHA – Office for the Coordination of Humanitarian Affairs, EU Seveso II directive committees and the crisis management cooperation of the Baltic Sea region.

EL MODEX (Modules Exercise) exercise was conducted in Türisalu, Estonia with the cooperation of Dutch Falck; Estonian Rescue Board also took part as a member in the flood pumping team BaltFloodCombat in Croatia.

Three Estonian Disaster Relief Team (EDRT) trainings were held in 2014 (USAR, LOG and HCP) and also a rescue team base course was conducted.

According to the contracts with the Ministry of Foreign Affairs, the completion and user training of International Humanitarian Partnership (IHP) modules was provided. Estonian Rescue Board representatives took part in two expert missions (the Philippines, Sierra-Leone) and in one team mission as a part of BaltFloodCombat module in the flood in Bosnia and Herzegovina.

Estonian rescuers as a part of the multinational module BaltFloodCombat during the flood response operation in Bosnia and Hertsegovina.

The director generals of the three Baltic states signed a three-way memorandum of co-operation in order to co-ordinate the activities of Baltic flood pumping module.

Estonian Rescue Board also fulfilled the role of the cross-border industrial accident convention of competent establishment and took part in its meetings.

3.4 Rescue operations

The aim of rescue operations is to offer prompt and professional rescue service while taking into account regional risk factors, general risks and the likelihood of accidents and their level of severity. 1832 people were employed in rescue services as of Dec.31st 2014. Rescue services were provided through 72 professional fire stations, 66 of which had life-saving capability.

This field involves the management of 16 services: fire extinguishing service, base rescue service, combustible liquids extinguishing service, chemical rescue service, decontamination service, water rescue service, rope rescue service, animal rescue service, rescue operations from the height, incident command service, oil skimming service, incident transport logistics service, incident attendance logistics service, search and rescue (in collapsed buildings) service, forest fire fighting service and flood combat service.

The number of incidents that needed operational response was 23 371 (20 265 in 2013), the most common of which was fire on 6870 occasions (5745 in 2013 or + 20%); a very large proportion belonged to the false alarms from automatic fire alarm reporting system - 4257 (table 4).

Reason for emergency call	2010	2011	2012	2013	2014
Fire	6439	6321	4973	5745	6870
AFARS calls	4863	4514	4778	4294	4257
Radioactive contamination	7	11	8	5	9
Chemical contamination	47	49	70	28	54
Oil product contamination	520	462	405	454	483
Incident caused by the force of nature	1824	1753	730	1543	696
Explosive ordnance disposal [1]	1434	1301	1283	1351	1367
Traffic accident	875	1158	1236	1103	1487
Aviation accident	2	4	1	1	2
Railroad accident	11	13	4	5	4
Accident on a body of water or coastal sea	170	154	137	179	219
Gas leak	150	253	288	268	317
Public utilities leak	19	43	61	71	89
Electrical services emergency	165	385	240	368	229
Providing assistance	-	668	1172	843	2325
Impaired person	-	230	596	700	869
Impaired animal/bird	1500	1248	947	864	823
False call	2813	2478	2225	2097	2698
Service	5	4	0	0	0
Training	333	224	121	70	154
Other	2201	997	110	276	417
TOTAL	23164	22124	19237	20265	23371

Table 4. Rescue incidents in 2010-2014

The number of rescue incidents increased by 3106 when compared to 2013. The types of incidents with the biggest increase were providing assistance (+1482 or 176% increase compared to 2013), in addition

1 Does not include the statistics of the Explosive Ordnance Disposal Centre. Only includes calls to explosive ordnance incidents through the Emergency Response Centre.

the number of wildfires (+1055 or +84%) and traffic accidents (+384 or +35%) increased substantially. The number of incidents caused by forces of nature decreased the most (-847 or -55%), the number of calls to electrical services emergencies also decreased significantly (-139 or -37%) (table 4).

The need for investments in rescue operations and the equipment needed were analysed as being the most important development activities in the department, a list of additional needs and buildings that need renovations were also compiled. A rescue network analysis taking account the professional and voluntary fire stations and strategic choices was also conducted. An overview of the state of rescue services in areas remote for rescue (incl. small islands) was drafted and different operational possibilities in improving service quality was analysed. This analysis will form a base for further development activities, taking into account the specifics and risks of rescue stations in remote areas.

A mobile application mGIS that was developed through the Estonian-Swiss cooperation programme GIS-112 was put into practice and installed in 129 rescue vehicles. The system will ensure faster and more precise location targeting and real-time two-way information exchange between the Emergency Response Centre and rescue vehicles.

Guidelines ensuring the preparedness of rescue stations were drafted and implemented in order to decrease the planned overtime of stations and surveillance personnel and optimize the budgetary resources to compensate the said overtime. Also the prioritizing of emergency calls and the transition to unified alert system was prepared.

In order to ensure better service quality, new emergency response rules and a dynamic emergency vehicle departure plan were implemented. Parallel to the previously mentioned developments, a "faster help principle" was also implemented – it directs the closest emergency

response resource to the incident in real time and in the shortest amount of time possible. This simplifies the decision-making process of the Emergency Response Centre, transferring the deciding factor over to technological solutions that make decisions based on previously entered data. Emergency vehicle departure rules were unified nation-wide; departure plan now includes bomb squad vehicles of the Explosive Ordnance Disposal Centre. Voluntary rescue units have now a bigger autonomy in managing smaller incidents and that can be considered as a significant change in providing rescue services.

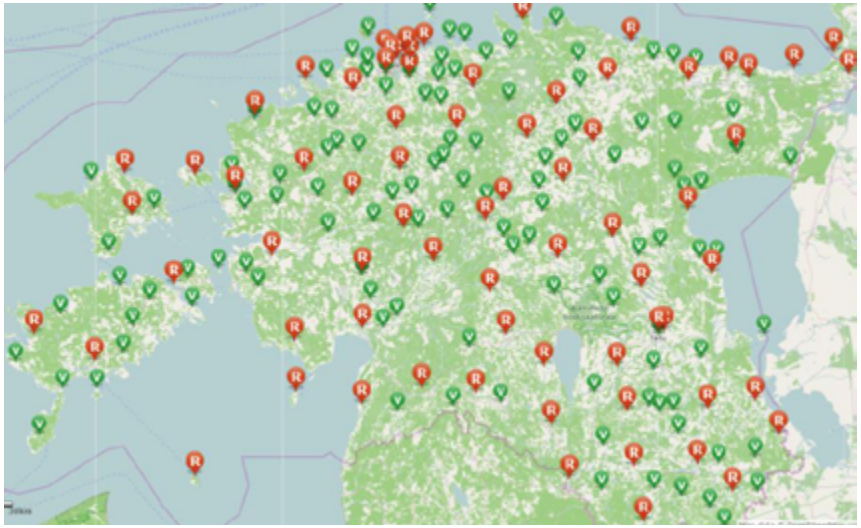
In terms of training, an analysis and a report were conducted on the current state of emergency vehicle driver training and training volume in order to regulate the quality of training and ensure the required competence of drivers. E-learning system was also developed and a pilot project saw the installation of Lync conference devices in certain rescue stations.

Cross-border cooperation saw the continuation of the Estonian-Latvian cooperation project Joint Activities in Tough Environment (JATE), improving the joint response capacity to emergency incidents in border areas. Main incidents needed for joint operations in border areas are wildfires, peat fires and forest fires. 3 fire pumps have been acquired in order to increase the rescue capacity of Estonia. Several cooperation seminars, practical training exercises to exchange the know-how between two parties and a forest-fire related joint training exercise have been conducted.

Competitions raising the professional level of skill of rescue workers were held: *"Pritsumees 2014"* (Fireman 2014), *"Kõrghoone Kuningas 2014"* (King of High Rise Building 2014) and *„Eliitkomando 2014"* (Elite Rescue Station 2014) and Estonian nationals in fire-fighting sport. The title of the Elite Rescue Station went to the Kuressaare Rescue Station for the second year in a row.

The preparedness to provide **fire extinguishing** service by voluntary rescuers was ensured in 109 locations in 2014 (105 in 2013). Three Volunteer Reserve Rescue Units (VRRU) supported the Estonian Rescue Board operations, in addition to voluntary rescue units. The number of certified voluntary rescuers at the end of the year was 1553 (2013 – 1281), 1292 of which are active in Voluntary Rescue Units and 212 in VRRU-s (2013- 179). The number of volunteer rescuers with independent rescue certificates (Level II training completed) was 1294 (2013 – 1051).

Volunteer rescuers took part in 1940 rescue operations in 2014 (2013 – 1258 or + 54%), 1772 of those incidents were responded with professional rescuers (2013 – 959 or + 85%). 168 rescue incidents were solved by voluntary rescuers only. Out of all incidents with voluntary rescue participation, in 424 incidents the voluntary rescuers were the first responders (22 % out of all incidents with voluntary rescue response) (map 2).



R- Professional fire stations, V- Voluntary fire stations
Map 2. Professional and voluntary fire stations 2014

The number of voluntary rescue stations in remote areas was 66 and 37 of these had 12 or more members.

Estonian Rescue Board started VRU team leader training in order to engage volunteers more efficiently in rescue operations. The new training plan is aimed at increasing the incident command competence at rescue sites. First training sessions are to be held in 2015.

66 professional fire stations with three or more team members provided **basic rescue** services in 2014.

Preparations were made to acquire 43 rescue trucks and 40 water-tank trucks – technical descriptions and procurement documents were drafted.

100 thermal imaging cameras were put into use in 2014. These cameras aid in the search of victims and help in fire reconnaissance, increasing life-saving capability significantly. Compressed air foam system (CAFS) extinguishers were also partially adapted; the Estonian Rescue Board acquired 10 additional sets.

An operational manual for rescue stations was drafted, thus regulating and modernizing surveillance service principles of action and standardizing the labour management within stations.

Incident command service in 2014 was provided with 66 rescue teams at command level I; 16 duty groups at level II; 4 regional duty officers at level III and 1 Estonian Rescue Board national duty officer at level IV. Staff environment response time to incident in regional level management was ensured within 120 minutes (additional time as per mode of transport to incidents on the islands).

A procurement to acquire vehicles for incident command level II was conducted in order to provide similar vehicles to all duty officer groups. The acquiring of new incident command vehicles reconditioned the state of equipment of incident command level II. The administration of regional duty officers, level III was also standardized and rules were updated in order to ensure better response preparedness.

Rescue operations management guidelines at incident site were implemented. These guidelines improve the quality of managing the emergency incident, reduce property damage and ensure faster rescue of victims.

The capability and preparedness to extinguish **forest fires** was provided in every region in Northern, Southern, Eastern and Western Estonia (24 rescue stations). Capability was provided to extinguish an estimated two and a half simultaneous forest fires, wildfires or ground fires with a scope of up to 600 hectares.

Chemical rescue capability was provided in six rescue stations (Kesklinna, Lilleküla, Annelinna, Pärnu, Kohtla-Järve and Sillamäe). West-Estonian Rescue Centre held training sessions (Incident command level I and II) to improve the preparedness of first responders in dealing with emergencies involving hazardous substances. East-Estonian Rescue Centre held a training session on handling combustible liquids for chemical rescue stations.

The preparedness to provide the service of **decontamination** was ensured by one rescue station (Assaku) in North-Estonian Rescue Centre.

Water rescue service was provided by 46 professional fire stations (2012 – 42) (26 of which had rescue boats) and 2 voluntary rescue

stations (with rescue boats). Coastal water rescue capability was achieved in Käina, Orissaare, Paldiski and Häädemeeste rescue stations (four modern rescue boats were procured). The locations of Estonian Rescue Board water vessels were re-organized and compliance with regulations was ensured. Rescue boats were relocated according to the results of the water rescue service analysis.

Rope rescue service was developed in cooperation with North-Estonian and East-Estonian Rescue Centre and the Estonian Academy of Security Sciences. Response readiness was ensured in two rescue stations (Keila and Jõhvi), providing a skilled rescue service saving people from limestone cliffs with top-level equipment.

Animal rescue service response (big game transport capability) was provided in four rescue stations (Mustamäe, Haapsalu, Elva, Jõhvi). Starting in 2015, animal rescue services will be included in the basic rescue service package, so all rescue stations will be able to provide first-level animal rescue in the future.

The capability for **rescue operations from the height** was provided by 8 rescue stations – Pärnu, Kuressaare, Kesklinna, Lilleküla, Tartu, Narva, Rakvere, and Võru. A procurement to acquire 6 ladder trucks was initiated, improving the level of high altitude service. The service will be provided by at least eleven rescue stations at 2015.

Oil skimming operational capacity no 1 was provided with one rescue station (Kohtla-Järve) and operational capacity no 2 was provided with four rescue stations (Kohtla-Järve, Tartu, Haapsalu and Kopli). Capability to initiate oil spill response at sea was provided in 18 hours (target: 24 hours) and coastal contamination clean-up capability was 2.3 km in 48 hours of daylight.

Extinguishing capability of **combustible liquids** (foam extinguishing capability) was provided by 11 rescue stations.

Flood combat capability was ensured by Türi and Paide rescue stations. **Search and rescue in collapsed buildings** was provided by Lilleküla rescue station in the North-Estonian Rescue Centre.

Incident transport logistics service providing capability was ensured on the same level as in 2013, i.e. large container transport with a container truck in 11 professional fire stations; medium container transport in 8 professional fire stations; water transport with operational vessels in 4 professional fire stations. Rescue logistics were trained alongside administrative department people; operations in the department of logistics were standardized, helping to simplify the logistics management at emergency operations and to involve logistics at operations across the country. **Incident attendance logistics** service capability was provided by one rescue station (Kose) in the North-Estonian Rescue Centre and with Kose logistics centre.

3.5 Explosive Ordnance Disposal

Explosive ordnance disposal service is aimed at preventing detonations caused by explosives so that there will be no explosion casualties in Estonia. There were 74 people employed in explosive ordnance disposal centre as of Dec. 31st 2014. Explosive ordnance disposal encompasses the management of five services: rendering safe unexploded ordnance, rendering harmless bomb threats and rendering safe improvised dangerous explosive devices, tackle CBRN hazards, underwater explosive ordnance disposal and detecting explosives ordnance with the help of canines.

The Estonian Explosive Ordnance Disposal Centre (EEODC) received 1614 emergency calls in 2014, which means a 9% increase when compared to the previous year (2013 - 1479). 3627 explosive ordnances were rendered harmless; the corresponding number in 2013 was 3552 (table 5).

Explosive-related preventive work raised awareness at events and schools, reaching an audience of up to 21 000 people. The campaign to encourage people to surrender their explosive materials without the fear of retribution was held for the fifth time. The campaign was planned to last for two weeks and during the event the campaigners emphasized the change in legislation that absolves a person from punishment in cases where they surrender explosives voluntarily.

The focus was also on negotiating the creation and legalization of locations for destroying explosive ordnance. Such designated locations increase safety, protecting the surrounding environment, minimizing the dangers caused by an explosion and ensure a safe zone for a minimally small crew. The list of necessary personal protection equipment and future investment needs was also mapped out.

Fatalities and challenges	2010	2011	2012	2013	2014
Killed in explosions	2	0	1	0	0
Injured in explosions	13	7	1	9	6
Explosions	10	15	4	8	5
Bomb threats	29	31	26	27	12
incl. schools	1	3	6	2	1
Bomb suspects	141	171	151	128	123
Improvised explosive devices	5	6	3	3	1
Explosives detection (VIP support)	108	86	81	74	68
Explosive ordnances	3102	2808	3042	3552	3627
Total	1436	1301	1283	1479	1614

Table 5. Explosive Ordnance Disposal indicators, 2010-2014

Rendering safe unexploded ordnance service was ensured within 90 minutes to any given location in mainland Estonia (additional time as per mode of transport to incidents on the islands).

There were a record number of munition disposal calls in 2014 – 1143 (the most out of past 23 years). Professional explosive removal qualification standards were established, which are based on the International Mine Action Standard (IMAS) standards. All explosive ordnance disposal technicians possess an applicable valid professional qualification.

The cooperation with The United States Department of State continued with the Mine Risk Education (MRE) program that included a training session on using multimedia tools.

EEODC continued the training of the Swedish civil emergencies agency MSB humanitarian mine technicians for field work; two explosives ordnance technicians took part in MSB humanitarian missions in Mali and South-Sudan.

In 2015, the EEODC plans to analyse the locations where munition have been found and conduct scheduled work in those areas. Emergency calls will not be waited for; instead, locations at a higher risk of containing munition will be inspected.

Emergencies with a **bomb threats and improvised dangerous explosive devices** were ensured a 90 minute response time, additional time as per mode of transport to incidents on the islands.

Explosives detection was conducted on 68 days (2013 - 74). Most significant of which was the visit of the President of the United States, Barack Obama. EEODC responded to 123 bomb suspects (2013 - 128) and 12 bomb threats in 2014 (2013 - 27).

In order to ensure safe conduct and improve cooperation with partnering structures, they were provided with over ten training sessions in the course of several explosive ordnance disposal events.

In 2014, the EEODC insured the information interchange on explosive ordnance disposal and made sure the voice of Estonia was heard in the following international organizations: International Bomb Data Centre Working Group (IBDCWG), European Explosive Ordnance Disposal Network (EEODN) and EU Bomb Data Systems (EBDS).

CBRN (chemical, biological, radiological, nuclear) **hazard** service provides the reaction to chemical, biological, radiological or nuclear threat or danger. In order to develop this capability, all bomb squads took part in CBRN training sessions as well as an international virtual training exercise on chemical attack that took place in Tallinn. Equipment

was upgraded by acquiring different new spectrometers: a gamma-ray spectrometer to measure radiation; ion mobility spectrometer and an atomic absorption spectrometer to determine attack poisons. New protective clothing and sample kits were also obtained as well as a decontamination device. The plan for 2015 is to ensure 24/7 CBRN operational response preparedness.

Underwater explosive ordnance disposal service was provided by East-, West- and South-Estonia's bomb squads; response time for explosives found in inland waters was 250 minutes (additional time as per mode of transport to incidents on the islands).

Two scheduled underwater explosive ordnance disposal camps were held in 2014, cooperation continued with bomb technicians from Estonian Defence Forces and Estonian Naval Divers. At the international level, cooperation with underwater explosive ordnance disposal specialists from the Finnish army was strengthened; USA Humanitarian Mine Action (HMA) team came for a visit to plan an underwater explosives ordnance disposal training course in Estonia with the necessary equipment. Initial plans are set to hold the USA underwater explosives ordnance disposal training course in Estonia in 2016.

Explosives detection dog service provided the necessary equipment for work, medical support and training for both dogs and handlers. 10 explosives detection dogs were certified by the EEODC in 2014. An annual certification for both dogs and handlers was a success and all participants passed their exams. Explosives detection dogs played a significant part in providing safety during the visit of the President of

the United States, Barack Obama. EEODC participated actively in the work of the European Union Explosive Dog Detection Working Group (EDDWG), where the unified standards for explosives detection dogs and dog handlers in the EU are being developed. The same workgroup is also working on a European-wide database of explosives detection dogs, facilitating international cooperation.

Bomb technician.

GLOSSARY OF ABBREVIATIONS AND ACRONYMS

AFARS – automatic fire alarm reporting system

CAFS – compressed air foam system

CBRN – chemical, biological, radiological, nuclear

CEPC – Civil Emergency Planning Committee

CPC – Civil Protection Committee

CPG – Civil Protection Group

EBDS – EU Bomb Data Systems

EEODN – European Explosive Ordnance Disposal Network

EDRT – Estonian Disaster Relief Team

ESA – Estonian Security Association

EU EDDWG – European Union Explosive Dog Detection Working Group

HCP (module) – High Capacity Pumping

IBDCWG – International Bomb Data Center Working Group

IHP – International Humanitarian Partnership

IMAS – International Mine Action Standard

JATE – Building Cross-border Capacity to Perform Joint Activities in Tough Environment

LOG (module) – logistics

MODEX – modules exercise

MRE – Mine Risk Education

MSB – Myndigheten för samhällsskydd och beredskap; Swedish Civil Contingencies Agency

NATO – North Atlantic Treaty Organization

UN/OCHA – Office for the Coordination of Humanitarian Affairs
HMA – Humanitarian Mine Action

USAR (module) – Urban Search And Rescue

VRU – Voluntary Rescue Units

VRRU – Volunteer Reserve Rescue Units

Translator and language editor:
EM Tõlge Tõlkebüroo

Layout:
Areal Disain

Published by:
Estonian Rescue Board
Raua 2, 10124 Tallinn
Estonia

„Estonian Rescue Board Yearbook 2014“ on the web:
www.paasteamet.ee/et/paasteamet/organisatsioon/aastaraamat2014.html

PÄÄSTEAMET
Estonian Rescue Board

www.paasteamet.ee