

Project
Future for fire-fighters
Mapping

of modes of non-formal training within the rescue system
in Iceland, Finland and Sweden.

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norden
Nordplus

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Sammanfattning

EU:s civila krishantering riktar sig alltmer till offentlig förvaltning och räddningstjänst vilket innebär ändrade arbetsuppgifter för brandmännen. Ett problem är att räddningstjänstens ansvarsområden är många och nu blir fler. För att bibehålla en hög kompetensnivå har det här projektets huvudmål varit att kartlägga icke-formella utbildningar som finns inom räddningstjänsterna.

Europeiska kommissionens memorandum lyfter fram tre kategorier av meningsfullt lärande; formellt, icke-formellt och informellt lärande.

Icke-formellt lärande - organiseras "vid sidan av", t.ex. som vidareutbildning och personalutbildning, kompetens som en person besitter oberoende av hur de förvärvats.

Om en resurskrävande olycka kräver insatspersonal från flera olika stationer kan det på grund av skillnader i kunskap hända att insatsen inte blir löst utifrån optimala metoder och arbetssätt. Det kan i sin tur betyda att säkerheten äventyras både för insatspersonal och tredje man. Med de tydliga differenser som finns försvåras nationell samverkan och gränsöverskridande arbete inom Norden samt motverkar EU:s intentioner om fri rörlighet för arbetskraft.

Det finns ett mycket stort behov av både nationell och internationell samordning av räddningstjänsternas arbetssätt och metoder och vi rekommenderar deltagarländerna att sprida den här kunskapen till de övriga nordiska länderna och tillsammans med dem ansöka om fortsättning, t.ex. i ett nordiskt utvecklingsprojekt.



Summary

Handling of crisis in the civilian field has nowadays more focus on public administration and rescue organisations which means altered tasks for the firemen. One problem is that the rescue parties now meet an increasing demand for activity of a kind for which they not always have adequate competence.

To maintain a high level of competence, the main target of this project is to lift forward non-formal training which now is established within the various rescue-organisations. The European Commission's memorandum gives an example of three categories of learning; formal, non-formal and in-formal.

Non-formal learning is usually organised locally as training courses, personal-learning most of which persons are well aware of regardless of how it has been learnt.

If an accident occurs, which requires a participation of several fire brigades; it might well happen that the result will be less satisfactory as there are differences between stations in approaching the accident. This again could jeopardize safety both for personnel and third party. Considering the differences which are now obvious, the national co-operation and the over-the-border work within the Nordic countries, it is clear that the intentions from EU for free labour movements are obstructed.

There is a considerable demand for both national and international co-ordination for the methods now used by the rescue-organisations and we strongly recommend all national parties to disseminate knowledge to the Nordic countries and together with them apply for a continuation i.e. in the form of a Nordic evolutionary system.



1 Project

1.1 Background

During the planning of the 'Study days of the Nordic firemen' of the year 2007 in Stockholm the idea of creating a common platform for the documentation of the skills among the Nordic rescue services came into being. Very little of the exchanging of experiences that takes place in connection with seminars and other Nordic meetings will be developed further, into common training and education. The profession is demanding and it requires continuous renewal of skills in all the areas involved; there, however are major differences among the education available after the basic training.

It was at that time when Mikael Svanberg (vice chairman of BRF Stockholm) began to contact the International Programme Office to identify, what possibilities there are available to apply for EU-subvention. After a number of seminars and meetings the most appropriate thing seemed to apply for support from 'Nordplus Vuxen' ('Nordplus for Adults') financed by the Nordic Council of Ministers.

The Nordic Council of Ministers is a cooperation organ for the governments in Denmark, Finland, Iceland, Norway and Sweden as well as the Home Rule Governments of Greenland, Faeroe Islands and Åland Islands. The cooperation covers e.g. the area of education where there are a number of support forms available under the common concept of 'Nordplus'.

Assisted by experts, it was ascertained that the rescue services in the Nordic countries are partly educational organisations that comprise formal education (within the framework of the official educational system), non-formal training (organized alongside with e.g. further education, personnel training etc.) and informal training (daily training within the working life, family life and social life, i.e. where training does not take place intentionally).

First of all, 'Nordplus for Adults' (*Nordplus vuxen*) turns to organisations dealing with adult education in the Nordic countries. Among the available forms of project, a mapping project was identified as suitable one to be applied for.

A mapping project is to be based on available knowledge and studies already undertaken, so that a new mapping project will not repeat the analysis and investigations. The purpose is to define development needs and to prepare recommendations or suggestions for future development areas.

In the course of years, several analysis and investigations have been made within the rescue service in order to reconcile and to unite the education between countries, but without success. What are missing today are the fundamental standardized working methods that would facilitate the cooperation across the borderlines. Every accident has its own threats and possibilities, every one of them, however require extreme flexibility. To be able to be flexible requires a high degree of security. Globalisation and the every-



day threats that have come closer have caused many to value the uniting and standardizing of skills and experiences in the modes that would lay the foundation.

1.2 Aim

The aim of the mapping is to identify and to summarize the development of competence that exists and to focus on what is used by means of:

- Making the existing formal and non-formal education visible
To identify the common denominators at the formal basic education levels in each respective country
- To identify obligatory non-formal education in each respective country.

When an educational organisation such as rescue service does not provide credit points for higher education or any certification that could be accepted as other studies, those areas that are found to be the least interesting are neglected. When there courses that do not have validation, it is natural that one's special interests are given the priority.

1.3 Target

The target of the project was to identify non-formal education in the participating countries and to make comparisons.

Partial target

During the project several partial targets have been prepared in order to achieve the set target.

The partial targets that have been prepared include:

- comparison between the formal education given in the participating countries
- to find out about the requirements, to work in another country
- to define a risk area
- to construct a common 'typical accident'

1.4 Preconditions and limitations

A precondition to receive subvention to a mapping project was the participation of the minimum of two Nordic countries. An expressed requirement was also that the collected information and results of the work of the mapping project are to be evaluated, documented and distributed.

Iceland, Finland and Sweden got together and started the process for a mapping project within the rescue service.

First of all, we have decided to limit the project to comprise the non-formal education in each respective country.

We have also limited the scope to the areas of big cities.



Target group

The target group comprises full-time firemen with basic education.



2 Participating countries

The three partner organizations are all three professional national organizations for the rescue service in each respective country. One of their most significant tasks is to develop the rescue service in their own country, and together with their members to influence the development of competence and educational opportunities for the profession. The Nordic countries need to be united, to identify levels of competence, education related requirements and the possibility for the certification of the future fireman.

2.1 Sweden

The Swedish confederation of Firefighters in Sweden ('Brandmännens Riksförbund Sverige') is a party-politically independent professional state organization for persons employed within the rescue service in Sweden. The federation was established in 1945 and it obtained rights to negotiate in 1946. The federation has today approx. 8700 members and it organizes personnel employed by the municipal, state and private sectors. One of the confederations most significant tasks is to develop the Swedish fire and rescue service. BRF works to obtain better working conditions for its members.

The management of the confederation consists of 11 ordinary members and 5 deputies, who themselves are firemen and therefore have a proper understanding what it is to work at the fire stations in the municipalities of the country. Each department of the federation appoints its own members, while the members have a great influence. The delegates are to represent their federation in congresses and other important events.

2.2 Iceland

The National Union of Fire-fighters and EMT-Paramedics (LSS) is the total organization of fire-fighters and EMT-paramedics. LSS was first established on 12 May 1973 as a non union association. The initial meeting was attended by some 73 members of 22 fire departments from all of Iceland. The non union association was called the National Association of Fire-fighters.

The trade union, LSS, was established on 2 May 1992 at the Munadarnes vacation centre in Borgarfjörður in Southwest Iceland. The union's establishment was based on the foundations of a non-union league of fire-fighters that had the same name, and on this occasion the new union undertook all of the previous one's commitments. The structure of LSS is based on individual membership in the relevant local union; however, special LSS membership is possible for non-active fire-fighters.

Prior to the establishment of the actual trade union back in 1992, the full-time fire-fighters were members of municipal and state employee staff organizations, which negotiated their wages and terms of employment, i.e. until such date that LSS signed its first collective wage agreement in June 1994, in a capacity as a fully pledged fire-fighter union. The old non-union league of fire-fighters focused, first and foremost, on professional and safety-related factors as well as issuing a wage table for part-time fire-



fighters in the rural districts, in collaboration with the Association of Local Authorities in Iceland.

On 15 May 1999, the National Association of EMS Workers was merged with LSS under the current name, the National Union of Fire-fighters and EMT-Paramedics. LSS became the 39th member union of the Federation of State and Municipal Employees- BSRB, in October 1993.

2.3 Finland

Finland's Firemen's Federation, Suomen Palomiesliitto SPAL ry, is a professional federation for those employed within the rescue service and regional fire brigade control in Finland. The members are employed by the state, municipalities, federations of municipalities and the private sector.

The Federation was established on 1 November 1993. Today, the federation has approximately 3000 members.

Finland's Firemen's Federation is active trying to improve its members' professional and economic benefits, to influence their social standing as well as the development of their benefits and their belonging together, cooperation and sense of responsibility. As a professional federation we aim at influencing that our members' physical, psychical and social security is guaranteed in all the work tasks.



3 Mapping

The mapping has been done in several stages, and it has been comprehensive to secure the value of the recommendations.

3.1 Formal education

The formal course schedule in the three countries has been compared, and all the three countries have education subsequent to higher secondary school (see Attachment 1).

Sweden	Finland	Iceland
Secondary school 3 years	Secondary school 2-4 years or vocational school	Secondary school 4 years or vocational school
SMO Training in protection against accidents, 80 credit points, 2 years. Rescue services Education free of charge Entitled to student grant	Rescue crew exam, Rescue institute 1.5 – 2 years Education free of charge	Rescue service 80 h LIA ('Learn at work') 12 months, Rescue school 13.5 weeks Education free of charge
	EMT (Emergency Medical Technician), included in the basic training	EMT – B 128 h = 3.2 weeks BTLS-Basic BTLS-Advanced

Note: In Iceland and Finland these include also responsibility for the ambulance. Iceland follows the Brussels standard regarding the equipment, personnel and safety of the ambulance.

The principal aim of the education given in the three countries is that after having completed the education, the pupil is able to choose the correct and most appropriate methods to rescue life, property and environment.

The society and the new legislation regarding rescue services directs the work even more and more towards preventive safety work, to avoid accidents. In all the countries it is important that everyone within the rescue service is familiar with the legislation regarding rescue services and can understand its content.

The Icelandic basic education corresponds with the basic education given earlier in Sweden that consisted of 15 weeks. Therefore, Iceland does not have really the same position of departure as the two other countries.

The Icelandic and Finnish firemen are trained to become EMT (Emergency Medical Technician).

The interesting thing is and where we have been able to draw equal conclusions of the formal education is the uniform formulation of the target where the students' results can be lead and related to the local levels, define risks within the society and influence the individual. They should be able to give examples of the legislation affecting the area regarding protection against accidents. It is also important that they are able to understand how their own valuations and those of the society affect people's behaviour in different situations. To understand how individuals and groups see risks and how they behave based on their social and cultural background is very essential. The education comprises also how to execute target group analysis, simpler project works and preventive action.



The conclusion was that the basic education corresponds, with differences in the nursing training given in Iceland and Finland. With regard to Iceland, it also should be noted that the basic education is a little shorter.

3.2 Cooperation crossing borderlines

It is possible to work within the rescue service in all the EU countries with the precondition that the person referred to has completed approved education in the field of rescue service in his or her own country. Certain key roles, however, require you to be a citizen of the country where you work, because the rescue service is in most cases subordinated to the defence department. Today, there aren't any established methods to validate rescue education and training given in other countries in relation to other countries. The civilian crisis management within the EU is heading more and more towards public administration and rescue service, to help e.g. with the registration of real property, elections, taxation, education, medical and social services and to build functioning water and electricity supply and telecommunications, and for that reason, adaptation should be needed.



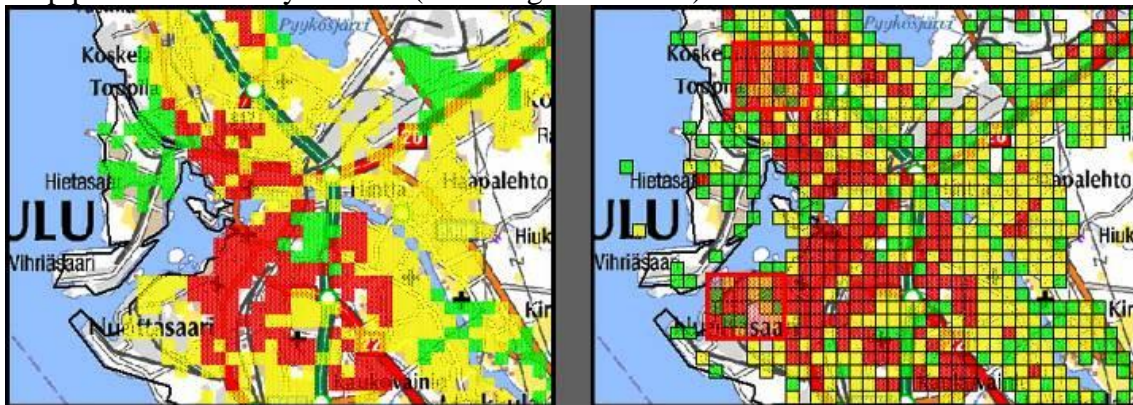
3.3 Risk area

In the course of the work it was discovered that a risk area is defined in different manner in the cooperating countries.

With regard to Iceland and Sweden, a risk area is identified in relation with the type and scope of the accident.

In Finland the Ministry of the Interior, the Rescue Department, has ruled a number of predefined parameters that together are included in a 'risk square' and when several risk squares' are joined, they form a risk area.

Map picture of the city of Oulu (Uleåborg in Swedish)



For the calculation of risk squares, a 'risk square' is an instrument for all the planning within the rescue service. A square consists of an area that is 250 m x 250 m (The so-called 'grid material' of the Rescue function).

A 'risk square' comprises the number of inhabitants (n), floor area (k) and road traffic accidents (t) divided into risk categories according to their number.

Risk category 1:	$n > 250$ or $k > 10\,000\text{ m}^2$ or $t > 1$
Risk category 2:	$60 < n \leq 250$ or $2\,500\text{ m}^2 < k \leq 10\,000\text{ m}^2$ or $0.5 < t \leq 1$
Risk category 3:	$10 \leq n \leq 60$ or $250\text{ m}^2 \leq k \leq 2\,500\text{ m}^2$ or $0.1 \leq t \leq 0.5$
Risk category 4:	Risk squares that do not fulfil the conditions for 1-3.

A risk area consists of the minimum of 10 risk squares that belong to the same or a higher risk category affecting each other. For a road, a risk area based on the real risk category for a distance of one kilometre is created.

The category of a 'risk square' can also be determined based on the accidents that have occurred, if their number can be shown statistically during a follow-up period long enough.

A risk object is a particular object where the handling of a risk for accidents requires special measures. It is necessary to identify individual risk objects that require special arrangements.



A defined risk area verifies and makes the planning of resources easier; however, regardless of the fact how each country assesses a risk area every one of them has a structure of readiness for alarms. This readiness appears different depending of the fact where the rescue service is located in each country. The table applies to the capitals.

Response time and resources first on the spot outside of the big city level

Iceland	Sweden	Finland
Within 90 seconds x number of rescue personnel will be ready	Within 90 seconds x number of rescue personnel will be ready	Within 60 seconds x number of rescue personnel will be ready
Reykjavik: 1 + 4 within 5 minutes	Stockholm: Within road tolls: 1 + 6 within 7.5 minutes	Helsinki: Within the first risk area: 1 + 3 within 6 minutes
	Other cities: 1+6 within 9 minutes	Within the second risk area: 1 + 3 within 10 minutes
		Within the third risk area: 1 + 3 within 20 minutes
Smaller places (x000 inhabitants) 1 + 3 within 20 minutes	Smaller places (x000 inhabitants) 1 + 4, time depends on the distance	

Note: Suitable additional personnel will be alarmed, if necessary.
 1 = Leader of the rescue function and the rest of the number consists of firemen.



3.4 Identification

In order to be able to map the forms of non-formal education, a common model traffic accident is to be determined.

The accident was constructed to comprise the following parameters:

- 2 cars
- 2-3 persons
- An ordinary Sunday
- December
- Temperature below zero
- Two-lane highway
- Time 17:00
- Cloudy
- A lot of traffic
- Road status: ‘modd’ (Swe), ‘slabb’ (Icel), ‘loska’ (Fin)

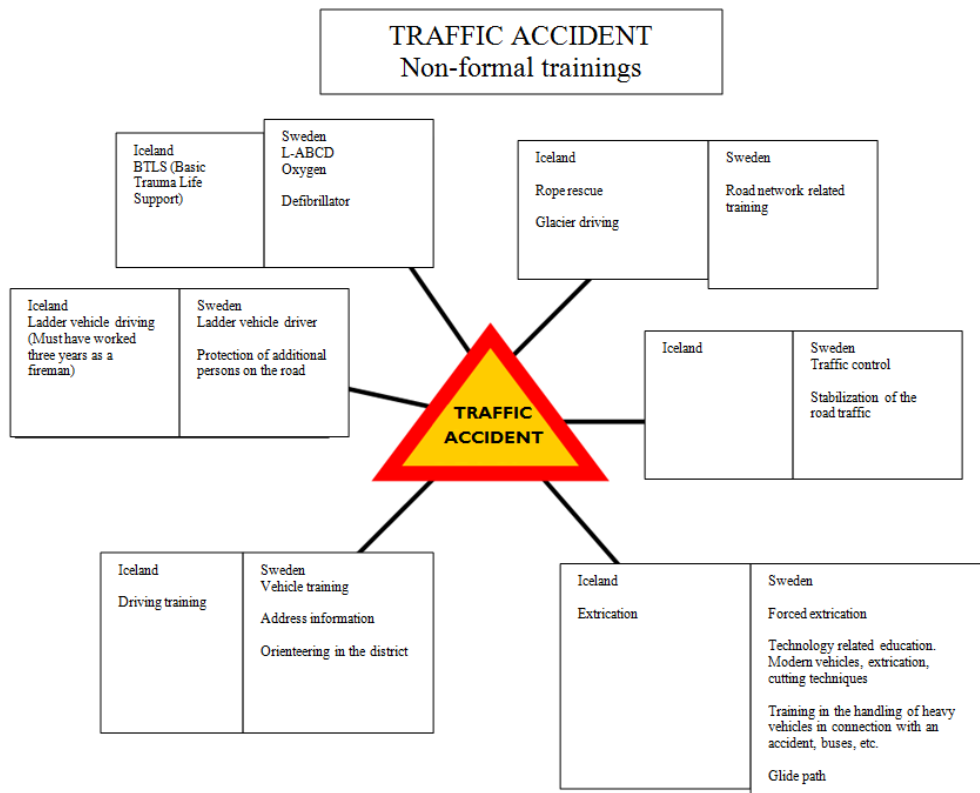
After a typical accident with a high risk, and the resources needed to handle the situation were defined, the course of action in each individual country with regard to the order and the dealing with the accident were discussed.

RL=Fire officer		Resources and the course of action		
	Iceland	Sverige	Finland	
Course of events 1	Reykjavik: 2 Units incl. RL 2 Ambulances 1 Emergency vehicle If there is very little information available, this force will be sent.	Stockholm: 2 Units incl. RL 2 Ladder vehicles 1 Ambulance 1 Possible emergency vehicle Two stations from different districts drive towards each other, towards the accident, not to get stuck in the traffic.	Helsinki: 3 Units 1 RL car 2 Ambulances 1 Emergency vehicle The same force regardless of the alarm info	
Course of events 2	Secure the area Own safety Scene Size up – Report RC RL together with ambulance and police order more resources Ambulance and police help with the accident in the hot and warm zone	Windscreen report RC Secure the area Own safety Situation report to RC Rescue service jointly with ambulance and police request more resources	Report RC Secure the area Own safety More ambulances A RL hands over to police, ambulance and doctor	
Conclusion	Clean, stabilize, remove possible absorbent RL draws a conclusion about the rescue work and reports to RC and leaves to the police and owner	Clean, stabilize, remove possible absorbent RL draws a conclusion about the rescue work and reports to RC and hands the responsibility over to the police and/or owner	Clean, stabilize, remove possible absorbent RL draws a conclusion about the rescue work and reports	



After the course of action had been determined, it was about the time to discuss the actual measures taken in connection with a traffic accident. Quite soon it became clear that there is a need to define several accidents, because a number of measures came out with relevant non-formal training that actually belonged to other accident types. Those are presented in Attachment 2.

It is somewhat difficult to draw a line between non-formal trainings that are available in connection with other accident types. When the measures taken in connection with a traffic accident were discussed it came evident that several of them were based on the skills derived from a number of existing non-formal trainings available both in Iceland and in Sweden.



Non-formal trainings given in Iceland and Sweden are partly similar and they should be considered bearing in mind the possibility of including them in the formal education in order to reduce the risk of having different levels of competence.



4 Conclusions

One of the current problems is the fact that there are several areas of responsibility within the rescue service, and in order to be able to guarantee one's own and a third party's security, all the areas need to be updated continuously, to maintain a high level of competence.

Finland stands out in a way that, to a great extent, their work is regulated by law. This is manifested by the Ministry of Interior's 'Instruction for readiness to action regarding the rescue function, risk areas and resources.

Iceland has the previous Swedish form of education, 15 weeks and EMT (Emergency Medical Technician) – training that Finland does, but Sweden does not have. Sweden and Finland have today basic education with similar basic structures; the Finnish basic training, however, is more practically oriented.

The thing that separates Iceland and Sweden from Finland is how follow-up, repetition and new skills are dealt with. In Finland there are regularly centralized news broadcasts to keep firemen up-to-date, and they are followed by exercises at the station.

As far as Iceland and Sweden are concerned, follow-up, repetition and new skills have instead been developed into non-formal trainings that can also be entirely local ones. For that reason, there may be big differences in the data banks and skills between stations and above all in the skills and training that firemen are provided with in addition to the basic training.

In most cases the non-formal training is given at the stations with special competence or when required. In certain stations there are enthusiastic persons who have passion for some area, and they create local training with a risk of giving priority to their own interpretations. With regard to the Swedish rescue service, there is the weakness, because there is a number of ways to carry out one's work tasks, and this as such, may produce difficulties in crisis situations. If an accident needing resources requires additional personnel from several different stations, in practice this may mean that the case will not be solved optimally with regard to methods and the working manner. In certain areas, there may be considerable differences in the working manner and in the methods applied. The work crossing borders does not become natural, and it does not appear as an alternative, neither domestically or internationally.

Because there are significant differences within the countries' rescue services, this hampers the intentions of EU regarding free movement of labour.



5 Recommendations

The following recommendations have been prepared based on the analysis and results of the mapping:

- There is an extremely great need for both national and international coordination of the work modes and methods used in rescue services. Finland has shown that most of the work carried out within the rescue service is regulated by legislation. Therefore, the recommendation is based on the model applied in the Finnish rescue service system; it should be used as the starting point for the standardizing of methods.
- There are a number of non-formal trainings given in Iceland and in Sweden that should be included in the basic education, for everyone to have the same basic skills.
- Most of the Swedish firemen have obtained the same fireman's training that is given also in Iceland, i.e. 15 weeks' basic training. Because there is in addition to this a great variation of non-formal trainings, it is therefore difficult to validate their skills against the Swedish 'SMO-training' and the Finnish 'Fireman's examination'.
 - For that reason, a part of this recommendation is to work in cooperation between the countries, to pick up the advantages in each others' education system, and in cooperation to use the OECD's guidelines about adult education as the point of departure, to encourage towards higher capability of being employed in other countries.
 - The second part is that one's own country should commence a validation process jointly with relevant organizations, municipalities and institutes of higher education.
The validation is a process containing structured evaluation, documentation and acknowledgement of skills and competence that a person possesses regardless of the manner in which they have been obtained.
- The civilian crisis management of the EU is more and more oriented towards public administration and rescue service which contains altered working tasks for firemen.
For the third party, it also means greater own responsibility, and that way an increased need for information and skills of the rescue service to provide security in case of accidents. Rescue service shall in the capacity of an educational organization develop training in its daily work towards the third party, to improve security and alertness within the society.



- We recommend the participating countries to distribute this information to the other Nordic countries and together with them to plan continuation e.g. within a Nordic development project. In addition to this, to have those involved who previously have carried out a Leonardo da Vinci project touching upon the recommendations, European Firefighter Vocational Study Report, Contract No. UK/97/37021/I.1.1.a, 1997-1999.

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Homepages

Iceland

www.lsos.is Professional federation for the rescue service personnel

www.brs.is Fire safety authorities

Finland

www.pelastustoimi.fi/en/ The Ministry of Interior's official homepage for rescue services

www.pelastusopisto.fi Rescue Service Institute

www.palomiesliitto.fi Professional federation for the rescue service personnel

Sweden

www.av.se/lagochratt/afs/ Institute of working environment AFS Collection of writings

www.srv.se Rescue service system

www.brandfacket.se Professional federation for the rescue service personnel



Attachments

Attachment 1

Educational plans/formal education in Iceland, Finland and Sweden.

You can read and download in the address www.future4firefighters.com

Attachment 2

Non-formal training for a fire accident, valid in Iceland and Sweden.

