



Bu Proje Avrupa Birliđi tarafından finanse edilmektedir.  
This project is funded by the European Union.



**YEREL YÖNETİM REFORMU  
PROJESİ (YJR III)**  
LOCAL ADMINISTRATION REFORM  
PROJECT (LAR III)

## REPORT ON STANDARDS FOR PREVENTIVE AND PROTECTIVE LOCAL FIRE SERVICES

20.06.2022

National Expert: Emin Pehlivan

National Expert: Dr. Nazan Cömert Baechler

National Key Expert: Dr. Volkan Recai Çetin

Reference to the Description of Action	
<b>Component</b>	C.2. Capacity Building for New Metropolitan Municipality Model and Inclusive Local Governance Processes
<b>Activity</b>	A.2.2.1. Develop And Implement Local Service Delivery Standards In Order To Simplify The Processes For Service Provision
<b>Output</b>	Report on Standards for Preventive and Protective Local Fire Services



## Table of Contents

<b>Abbreviations</b> .....	<b>2</b>
<b>1. Introduction</b> .....	<b>3</b>
<b>2. Standards and Steps of Implementation</b> .....	<b>4</b>
<b>3. Current Situation Evaluation of Pilot Studies</b> .....	<b>35</b>
Standard 1.1. Voluntary Firefighting Definition, Code Of Conduct And Training .....	35
Standard 1.2. Minimum Qualifications Of Fire Prevention And Training Personnel Of Fire Department .....	36
Standard 1.3. Principles Of Creating Work Flow Diagram For Fire Prevention And Training Services In Fire Department .....	36
Standard 1.4. Inclusion Of Training And Prevention Activities In Performance Indicators .	36
Standard 1.5. Principles Of Positioning Fire Hydrants.....	37
Standard 2.1. Implementation Principles Of Vehicle Tracking, Camera And Communication Systems As Well As Software Used In 112 Emergency Call Centre Services Of Fire Department .....	37
Standard 3.1. Criteria For Compiling And Collating Fire Statistics .....	38
Standard 3.2. Administration Principles Of Fire Department Response Units .....	38
Standard 3.3. Considerations To Provide Operational Effectiveness.....	39
Standard 3.4. Considerations For Determination Of Response Time .....	39
Standard 3.5. Coding Of Fire Department Vehicles According To The Type Of Service And Determination Of Equipment And Material Required In These Vehicles.....	40
Standard 3.6. Things to Consider on Preparing Daily Control and Test Forms of Fire Vehicles and Equipment.....	40
Standard 4.1. Establishing Training Modules Which Will Be Used on Public Awareness and Awareness-Raising Training on Fire Prevention Activities .....	40
Standard 5.1. Reviewing Request, Suggestion and Complaint of The Citizens.....	41
<b>4. Standards Complied As a Result Of Pilot Studies, and Activities To Be Undertaken ...</b>	<b>42</b>
<b>5. General Evaluation, Conclusions and Recommendations</b> .....	<b>59</b>
<b>Annexes</b> .....	<b>63</b>

## Abbreviations

EU	European Union
AÇM	Emergency Call Centre
AFAD	Disaster and Emergency Management Agency
RAM	Counselling and Research Centre
TSE	Turkish Standards Institute

## 1. Introduction

Local Administration Reform Project Phase III (LAR-III) is implemented by the United Nations Development Programme (UNDP) with funding from the European Union (EU). The co-beneficiaries of the project are the Ministry of Interior and Ministry of Environment, Urbanization and Climate Change. The Project covers developing municipal service standards in five areas with a view to enhancing service quality, and piloting such standards in selected metropolitan municipalities (MMs) and provincial municipalities.

In this framework, the Current Situation Report was first prepared which assessed the current situation related to fire services as one of the service areas provided by municipalities in terms of both legislation and organizations and practices and, simultaneously the Comparative Country Analysis Report which assessed the administrative structure, legislation and field practices of a sample of five EU countries (France, Germany, Belgium, Italy and Bulgaria). Country practices on fire prevention and protection services of fire department were addressed in the framework of primary issues in the current situation analysis. Attention was paid to evaluating suggestions and opinions of municipalities and fire departments which provided the service both in Türkiye and foreign countries and turning to field data to accessible data, evaluating implementation and legislation together while preparing both reports. After the two reports, service standards for the priority issues needed in Türkiye were determined in light of the international service standards and European good practices. The draft report which included the suggestions and legislative review was presented in a workshop held on 17-18 August 2021 with the participation of representatives of central government agencies and local administrations, and discussed in sessions where municipal fire department representatives participated.

When creating the recommendations for standards, TSE's current standards for issues in the scope of the study were reviewed and cited as reference for the standards recommended in the report, and the TSE standard contents that could be improved were also identified.<sup>1</sup>

The recommendations for fire service standards that were reshaped with the workshop conclusions were arranged for pilot studies at provinces by sharing and re-evaluating with central government agencies and local administrations, and other stakeholders in workshops organized in selected provinces (Tekirdağ, Balıkesir, Denizli, Kayseri, Ordu, Eskişehir, Gaziantep) in September-October 2021.

Considering that the creation of steps and procedures to implement standards was just as important as the formulation of standards, the Implementation Guideline for Fire Prevention and Protection Service Standard was prepared in order to guide municipalities on practices. During the extended second part of the project, these standards were tested for applicability in two selected pilot municipalities (Balıkesir and Denizli) under the project. The outputs of the pilot study evaluation meetings held in February-March 2022 revealed important good practices and contributions about how compatible the suggested standards were with the current practices and local conditions, how to provide efficiency and consistency on the applicability of the standard and how to implement it across the country at last.

---

<sup>1</sup> Evaluation Report of Pilot Studies for Development of Standards for Preventive and Protective Fire Services

## 2. Standards and Steps of Implementation

To deliver services effectively and at a certain standard of quality, it is of great importance that the qualitative and quantitative standards of the staff that will deliver it be determined at national level. All across EU countries and Germany, France and Belgium among the reviewed country cases, fire services are being carried out mostly by volunteer firefighters. Professional and volunteer firefighter employment and their ratios are determined based on the city's size and risk status in fire service corps. Volunteer firefighters are subject to the same nationally standardized training programme and duration as professional firefighters and their training is carried out in local training centres and/or fire service corps.

Defined as a public service provided by municipalities, fire services are activities and services that have expanding purviews and require increasingly more technical knowledge, skills and experience being optimally used together with the shift in societal structures and increasing risks in Türkiye as in many other countries. Although it is primarily identified with fire prevention and response, it is important that all fire services delivered in the framework of protection of life, property and ecosystems and all aspects of the organization in which it is defined be delivered at certain standards and measured at every stage. From this viewpoint, every aspect of the fire service such as physical infrastructure, qualitative and quantitative adequacies in terms of human, vehicle and equipment, service delivery and evaluation of the service provided is subject to a standard and norm. In Türkiye, fire services are among priority municipal services that most need quality standardization. Despite efforts in recent years, current regulations fall short of responding to the needs in the field or cannot be implemented.

The present work is not limited only to the recommendations presented on the topics identified as needs in light of the activities and outputs<sup>2</sup> implemented under the project; it has also aimed to show how and under which circumstances the current legal regulations, guidelines and standards can be applied or used as reference in service quality improvement in order to make progress as well as how practices developed by certain municipalities can be used as examples and improved. Accordingly, based on the issues of the staff performing the service, buildings, facilities, vehicles and equipment to be used in the service, neutralization of the risk for the service, and planning of the activity, 26 standards were recommended under 9 main themes in the framework of 5 main components (Annex - 1).

However, these draft standards were discussed in the workshop organized with the participation of representatives of the relevant central government agencies and local administrations and non-governmental organizations on 17-18 August 2021. In the workshop, it was recommended that the matters that required legislative updates be removed from draft recommendations for standards and be assessed separately under the name of matters that required legislative updates. Thus, the proposed legislative amendment presented in the preliminary study were updated in line with the information obtained from the workshops and meetings in provinces and presented in the annex (Annex-2).

Therefore, since legislative amendments are required for these recommendations to directly contribute to the effectiveness of service quality and be implemented at national level, they

---

<sup>2</sup> Current Situation Analysis Report and Comparative Assessment Report.

were added to the matters of legislative amendments. Establishing the standards in an applicable and implementable way under the project was paid attention.

**The 14 standard topics specified in the framework of 5 main components and 7 themes have been revised and presented below:**

NO	STANDARD	NOTES/REMARKS	STEPS IN IMPLEMENTATION GUIDELINE
1.1	<p><b>Voluntary firefighting definition, code of conduct and training</b></p>	<p>In Article 4 of the “Regulation on Voluntary Participation in Special Provincial Administration and Municipal Services “, which is the first and only legislative piece on volunteering in Türkiye, volunteering is generally defined as: <i>“refers to natural and legal persons who participate in local administration services with no expectation of financial return by devoting knowledge, skills and abilities, all sorts of joint work, facilities and time, and public institutions that employ such volunteers in such services”</i>. But voluntary firefighting should be defined in a separate section in a broader and clearer way that will encompass the definition, volunteer’s rights, codes of conduct and training of voluntary firefighting. Voluntary firefighting is a public service that has a different content and significance than other types of volunteering which is applied voluntarily and conducted professionally. This professionalism requires having the same working language and therefore the same training as full-time professional firefighters due to the nature of work being directly related to human and other lives. For this reason, voluntary firefighting training should be given by the training unit staff of municipal fire departments in the training fields of fire departments that have training fields or the fire stations of fire departments that do not have training fields. These training courses should include the basic firefighting training curriculum that includes topics of burning, fire knowledge and extinction technology, dangers that may arise during a fire, personal protective equipment and air purifying respirators, vehicle equipment and extinguishing materials, fire response and teamwork, urban search and rescue knowledge, response to</p>	<p>It is aimed to define the title of volunteer firefighter at national level and provide collaboration in the implementation of voluntary firefighting in Türkiye.</p> <p>The implementation of voluntary firefighting is evaluated under the framework of citizen participation, decentralization, additional support on the basis of increased workload of the professional firefighter due to increasing risk elements and effective use of resources.</p> <p>Voluntary firefighting should be addressed separately from other volunteering practices in the public.</p> <p>For this reason, firstly, the title of volunteer firefighter should be clearly defined.</p> <p>Code of conduct in voluntary firefighting should be defined. After the training program of voluntary firefighters are arranged, Voluntary Firefighter Regulation which will implemented in across Türkiye should be prepared by including these information.</p>

		<p>traffic accidents, ropes and types of fastening, techniques for securing stretchers and transporting the injured, first aid and response, and occupational safety and health.</p>	
<b>LEGISLATION, TSE STANDARD</b>			
<ul style="list-style-type: none"> <li>• Regulation on Voluntary Participation in Services of Special Provincial Administrations and Municipalities (OG of 09.10.2005 issue 25961) (Annex-3)</li> <li>• Regulation on Municipal Fire Department (OG of 21.10.2006, issue 26326) (Annex-4)</li> <li>• Regulation on Balıkesir MM Voluntary Firefighting Department (Annex-5)</li> <li>• Regulation on Kocaeli MM Voluntary Firefighting Department (Annex-6)</li> <li>• Regulation on Antalya MM Voluntary Firefighting Department (Annex-7)</li> <li>• Regulation on Volunteers Who Serve on Forest Firefighting (OG of 11.09.2019, issue 30885) (Annex-8)</li> </ul> <p><b><u>REFERENCES:</u></b></p> <ul style="list-style-type: none"> <li>- Implementation Guideline of Development of Preventive and Protective Fire Service Standards</li> <li>- Comparative Assessment Report About EU Practices in Fire Services, UNDP, 2021.</li> </ul>			
<b>RELATED UNITS</b>			
<ul style="list-style-type: none"> <li>• Mol</li> <li>• MMS</li> <li>• TSE</li> </ul>			

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
1.2	<p><b>Minimum qualifications of fire prevention and training personnel of fire department</b></p>	<p>One specialized module of the firefighting training modules relates to how prevention, inspection and training activities for fire prevention and protection under the responsibility of firefighters will be applied, and to associated procedures and practices. The following are the minimum requirements for training and inspection staff who will be subject to such specialization training to carry out this service, benefit from this service at maximum level, and be employed at the fire prevention and training unit;</p> <ul style="list-style-type: none"> <li>• <u>Training Staff</u>: For the staff who will be assigned to delivery of training courses aimed at public awareness, persons who are graduates of technical programmes of universities such as chemistry, chemical engineering etc. and persons who have received pedagogical formation,</li> <li>• <u>Prevention and Inspection Staff</u>: Staff who will be employed in the prevention and inspection unit should be selected from graduates of faculty of engineering programmes such as civil, mechanical, electrical, and chemical engineering and faculties of architecture.</li> <li>• Staff who will be employed in the training and inspection unit should be selected from persons who have received master's level education or current staff should be made and encouraged to receive master's level specialization education.</li> </ul>	<p>It is aimed to prevent problems experienced in inspection and reporting in fire departments, deliver inspection and training services in a problem-free, effective and standard way and ensure that the recipients are satisfied with the service.</p> <p>It is necessary that inspection personnel to be assigned in Fire Prevention Services are informed about the Regulation on Protection of Buildings against Fire and can interpret it correctly and follow the international legislations issued on this matter. Training personnel should be experts in their field and trained about pedagogical formation.</p> <p>In this respect,</p> <ul style="list-style-type: none"> <li>• <u>Training Personnel</u>: The personnel to be assigned in training courses to raise the awareness of public are selected among those who are graduated from technical departments of the universities such as Chemistry, Chemical Engineering etc. and those who received pedagogical formation.</li> <li>• <u>Fire Prevention and Inspection Personnel</u>: The personnel to be assigned in fire prevention and inspection unit are selected among those who graduated from civil engineering, mechanical engineering, electrical engineering and chemical engineering departments of faculty of</li> </ul>

		<ul style="list-style-type: none"> <li>• It is deemed appropriate to administer psychological endurance tests to prevention and inspection staff.</li> </ul>	<p>engineering as well as faculty of architecture of the universities.</p> <ul style="list-style-type: none"> <li>• The personnel serving in the training and the inspection unit are preferably selected from those who received training at master's degree or existing personnel are ensured and encouraged to receive specialised training courses at master's degree on this subject.</li> <li>• It is recommended to carry out psychological resilience tests for fire prevention and inspection personnel.</li> </ul>
<b>LEGISLATION, TSE STANDARD</b>			
<ul style="list-style-type: none"> <li>• Regulation on Protection of Buildings against Fire (OG of 19.12.2007, issue 26735) (Annex-9)</li> <li>• Regulation on Municipal Fire Department (OG of 21.10.2006, issue 26326) (Annex-4)</li> <li>• Standard No. TS 12206 Fire Department – Organization and Training (OG of 09.04.1997) (Annex-10)</li> </ul> <p><b>REFERENCES:</b></p> <ul style="list-style-type: none"> <li>- Comparative Assessment Report About EU Practices in Fire Services, UNDP, 2021.</li> </ul>			
<b>RELATED UNITS</b>			
<ul style="list-style-type: none"> <li>• MoEUCC</li> <li>• MMs</li> <li>• TSE</li> </ul>			

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
1.3	<p align="center"><b>Principles of creating work flow diagram for fire prevention and training services in fire department</b></p>	<p>It will be appropriate for quality of service to tie workflow charts to a standard in order to facilitate the work of staff serving in fire protection services in fire departments, use time efficiently, and prevent potential errors. It is seen that certain MMs are preparing and implementing workflow charts aiming to increase their service quality. Procedures such as citizens' petitions, checks of relevant documents, response to citizen, inspections at workplace, preparing inspection records, serving inspection results to citizen, notifying any deficiencies in writing, carrying out a second inspection after reporting the remediation of deficiencies, and preparing workplace inspection report etc. should be laid out in such workflow charts. It will be beneficial in terms of service quality to standardize these workflow charts at national level.</p>	<p>It is aimed to provide a standard and effective service delivery for individuals, institutions and organizations that receive service from preventive and protective service units of the fire department, evaluate the performances of the fire department that provides service in this regard and facilitate the work of personnel who serve in fire protection services and efficient use of time and prevention of possible mistakes and deficiencies.</p> <p>It is observed in some municipalities that work flow diagrams applied in fire departments on the basis of quality management systems are put into practice in the findings obtained from the field. It is considered that it is necessary to standardize this work flow diagrams at national level in the same subject.</p> <p>Work flow diagrams are the way to visually indicate necessary steps and decisions to be made to execute a process in order with suitable figures.</p> <p>In this respect;</p> <p>Work flow diagrams in fire prevention and training services of fire departments involve which phases individuals, institutions and organizations go through to reach the conclusion during a certain period of time beginning from written application.</p>
<b>LEGISLATION, TSE STANDARD</b>			

- Regulation on Municipal Fire Department (OG of 21.10.2006, issue 26326) (Annex-4)

**REFERENCES:**

- The Workflow Charts for Prevention Services used by fire departments of certain municipalities can be used as examples.

**RELATED UNITS**

- MoEUCC
- MMs
- TSE

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
1.4	<b>Inclusion of training and prevention activities in performance indicators</b>	<p>The main goals for fire services and associated objectives and performance indicators should be set in strategic plans prepared by municipalities and such indicators should be measurable.</p> <p>It is necessary to do the following as the driving force behind increasing service quality;</p> <ul style="list-style-type: none"> <li>• Set quantitative targets to increase the number of fire hydrants in urban and rural areas (<u>Example</u>: In rural neighbourhoods and villages, placing at least one fire hydrant based on the population and risk status of the neighbourhood and village can be set as a performance indicator).</li> </ul>	<p>It is aimed to evaluate the performances of fire departments in training and prevention activities and the efficiency of training and prevention activities.</p> <p>It is recommended to determine the main purpose of fire services and relevant goals as well as performance indicators to achieve this purpose on strategic plans prepared by municipalities and, that these indicators are measurable.</p> <p>In this regard,</p> <ul style="list-style-type: none"> <li>• Quantitative targets are determined regarding the increase in the number of fire hydrants in urban and rural areas (e.g. it is possible to</li> </ul>

		<ul style="list-style-type: none"> <li>• Set quantitative targets for raising public awareness on disasters and emergencies (<u>Example</u>: The number of persons who will receive training in a year can be set as a performance indicator).</li> <li>• Set quantitative targets for workplace inspections (<u>Example</u>: The number of workplace inspections to be carried out in a year can be set as a performance indicator).</li> <li>• Set quantitative targets for satisfaction surveys made with the public who receive service are necessary (<u>Example</u>: Carrying out at least one satisfaction survey a year can be set as a performance indicator).</li> </ul>	<p>determine it as a performance indicator to place at least one or more fire hydrants in neighbourhoods and villages in rural areas in terms of the population and risk position of that neighbourhood and village).</p> <ul style="list-style-type: none"> <li>• Quantitative targets can be determined for the studies on raising awareness of public for disasters and emergencies (e.g. the number of individuals to receive training during a year).</li> <li>• Quantitative targets are determined for the inspected workplace.</li> <li>• Average time of arriving the fire zone is determined at urban and rural level.</li> <li>• A satisfaction survey will be conducted for public that receive service at least once a year to be evaluated the quality of service delivered.</li> </ul>
<b>LEGISLATION, TSE STANDARD</b>			
<ul style="list-style-type: none"> <li>• Regulation on Procedures and Principles for Preparing Strategic Plans, Performance Programmes and Activity Reports in Public Entities (OG of 22.04.2021, issue 31462) (Annex-11)</li> </ul> <p><b>REFERENCES:</b></p> <ul style="list-style-type: none"> <li>- Sample of Performance Indicator Monitoring Form (Annex-12)</li> </ul>			
<b>RELATED UNITS</b>			
<ul style="list-style-type: none"> <li>• MMs</li> </ul>			

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
1.5	Principles of positioning fire hydrants	<p>Placing fire hydrants on water networks in cities based on areas of fire risk is of great importance for the fire safety of residential areas. For this reason, it is deemed necessary to ensure that Article 95 of the Regulation on Protection of Buildings against Fire is implemented in all residential areas and especially in rural areas. Adding this topic in terms of penalties in the Regulation on Municipal Fire Department and implementing it primarily in rural areas is considered to be of great importance for the safety of life and property. This will also greatly facilitate response to land and forest fires. It is of great importance in terms of both service quality and the ecosystem due to the difficulties otherwise faced in water supply in land and forest fires.</p>	<p>It is considerably important to place fire hydrants on water network line in areas considering risk zones especially in terms of fire safety on settlement in rural areas. Today, the problems experienced to meet the needs of water for fire extinguishment drawn in rural and forest fires arise in the findings obtained from the field. By positioning fire hydrants in an organized way that can meet the demand, it is aimed to rapidly respond such fires by eliminating these problems and protect ecological system by reducing damages to occur.</p> <p>It is regarded as necessary to ensure the implementation of Article 95 of the Regulation on Protection of Buildings against Fire in all settlements, especially rural areas. It is considered as highly important in terms of safety of life and property that this issue is included in the Regulation on Municipal Fire Department in terms of enforcement and implemented primarily in rural areas. This situation will also provide great facilities regarding response to land and forest fires.</p> <p>In this respect,</p> <p>Municipalities are required to create at least one fire hydrant and/or alternative water sources that will meet fire-protection water demand in the villages and settlements which transformed into</p>

			<p>neighbourhood from village considering this issue in infrastructure procurements performed by Water and Sewer Administrations as well as the Bank of Provinces. Accordingly, it is necessary to carry out following points to meet fire-protection water demand;</p> <ul style="list-style-type: none"> <li>• Firstly, fire hydrants in the responsibility area are identified.</li> <li>• The hydrants identified are included in digital maps.</li> <li>• Then, the locations in which fire hydrant is primarily needed are identified considering risk position in the responsibility area.</li> <li>• If there is water network in these identified locations, fire hydrant is placed. If there is no water network, it is ensured to meet fire-protection water demand by providing alternative water sources.</li> <li>• Newly placed fire hydrants as well as alternative water sources should be included in digital maps.</li> </ul>
<b>LEGISLATION, TSE STANDARD</b>			
<ul style="list-style-type: none"> <li>• Regulation on Protection of Buildings against Fire (OG of 19.12.2007, issue 26735) (Annex-9)</li> </ul> <p><b>REFERENCES:</b></p> <ul style="list-style-type: none"> <li>- Standard No. TS 9684 Fire Extinguishing – Water Supply Resources (Date: 24.12.1991)</li> </ul>			

**RELATED UNITS**

- MoEUCC
- MMs Affiliated Entities (Water and Sewer Administration etc.)
- Turkish Standards Institute

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
2.1	<b>Implementation principles of vehicle tracking, camera and communication systems as well as software used in 112 emergency call centre services of fire department</b>	<p>The findings in the Current Situation Analysis Report indicate that different practices and automation systems are used in Fire and 112 Emergency Call Centres in general. Information received from the field reveals that service is carried out to European Standards in some of these practices whereas the same quality cannot be achieved in others. It is a fact that using the same type of automation system in 112 Emergency Call Centres will increase service quality.</p>	<p>It is aimed in planning of the operational services to provide cooperation and coordination regarding vehicle tracking systems, camera systems, communication systems, location notification systems for the notifying person, the system which shows water sources on digital map and software.</p> <p>When different applications and systems are used in fire department and 112 Emergency Call Centres, the service efficiency may not be provided. It will improve the service quality to use same kind of and integrated systems in 112 Emergency Call Centres.</p> <p>For this reason;</p> <p>it is necessary to ensure that same type of and integrated systems are used in 112 Emergency Call</p>

			Centres at national level in terms of improving service quality.
<b>LEGISLATION, TSE STANDARD</b>			
<ul style="list-style-type: none"> <li>Regulation on 112 Emergency Call Centres' Organization, Functions and Operations (OG of 16.05.2014, issue 29002) (Annex-13)</li> </ul>			
<b>RELATED UNITS</b>			
<ul style="list-style-type: none"> <li>MoI</li> <li>MoH</li> <li>MoFS</li> <li>MMs</li> </ul>			

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
3.1	<b>Criteria for compiling and collating fire statistics</b>	<p>Compiling and collating fire statistics, identifying fire risk trends by creating data sets on fires, and developing response techniques are of utmost importance for developing fire prevention strategies and making plans for them. Making these data sets, which are created at national level and allow for international exchange of knowledge and experience on fires comparable and able to present effective data are among the priorities of international fire organizations. As stated in the Comparative Assessment Report, it is seen that these data are used to develop strategies based on effective use of resources</p>	<p>It is aimed to provide contribution to make strategies on fire prevention and planning in compliance with these strategies, determine priorities and target audience in fire protection and prevention activities, identify fire risk trends and prepare response plans. It is particularly important in the development of fire prevention strategies in residential fires as well as the planning and implementation of studies on raising the awareness of public in accordance with need and target audience.</p>

		<p>by contributing to determining the priorities and target audiences in fire protection and prevention activities. It is especially important for developing prevention strategies in residential fires and planning and implementing public awareness-raising efforts based on needs and target audiences.</p> <p>Primarily, the issue of which fires will be included in <b>residential fire</b> statistics is important. Here, intentional and unintentional “accidental” fires should be separated. In the reviewed European countries, it is seen that fire statistics include mostly intentional accidental fires.</p> <p><b>Death</b> in fires should not only include deaths at the fire site. It also should include deaths resulting directly from the fire or caused by fire-related injuries after the fire (e.g., in the hospital). The issue of how long after the fire deaths caused by injuries will be registered as fire-related deaths is important and it differs between 48 hours to 6 months in the practices of different countries. In the reviewed country cases, objects falling, cardiac arrests, and suicides are not included in the death category whereas in other practices, deaths occurring while attempting to escape the fire are included. Deaths of unknown causes occurring at the fire site are considered fire-related deaths and listed separately as deaths of unknown causes.</p> <p><b>A victim</b> at fire should be defined as a person who is directly or indirectly affected by the fire. In terms of identifying those affected by the fire, it is necessary to differentiate between the number of people at the residence at the time of fire or the number of people who should be rescued from the fire.</p>	<p>It is necessary to execute the following points in order to prepare fire statistics in a way to produce applicable data that is appropriate for this purpose;</p> <ul style="list-style-type: none"> <li>• “Fire Report” (Annex-14) in the Regulation on Municipal Fire Department and “Post-Fire Procedures” can be re-evaluated by being addressed together and “Fire Statistics Form” (Annex-15) that is an annex to the Regulation on Municipal Fire Department can be upgraded.</li> <li>• Existing “Fire Notice Form” (Annex-16) and data containing fire reports are detailed and included concepts are separately presented along with the report with written explanations.</li> <li>• Related personnel in the fire department are trained for the content of terminology used in fire notice forms and fire reports.</li> <li>• Control systems are prepared to create systematic and organized statistical data in fire notice forms and fire reports.</li> </ul> <p>In this regard, to create statistical data set while preparing fire notice forms and fire reports;</p> <ul style="list-style-type: none"> <li>• The reason for fire outbreak is classified to form a basis for how the information is obtained from fire reports will be used as statistical data. For example, this classification in cases in Europe is considered as unintentional structure fires (by accident) and intentional structure fires, and</li> </ul>
--	--	---	---

		<p>at the residence at the time of fire or the number of people who should be rescued from the fire.</p>	<p>accidental fires are included in statistical data. This classification can be used.</p> <ul style="list-style-type: none"> <li>• The fire data control lists are created.</li> </ul> <p>It is possible to categorize the considerations while creating data control lists for fire reports into 4 groups.</p> <p>These include:</p> <ol style="list-style-type: none"> <li>1. Identification and data on human beings (victims):</li> <li>2. Data on Buildings</li> <li>3. Data on Fire</li> <li>4. Data on Response</li> </ol>
<b>LEGISLATION, TSE STANDARD</b>			
<ul style="list-style-type: none"> <li>• Regulation on Municipal Fire Department (Fire Notice Form -Fire Report) (OG of 21.10.2006, issue 26326) (Annex-4)</li> <li>• Standard No. TS 9870 Fire Department - Operations After the Fire (Date: 18.02.1992) (Annex-17)</li> <li>• Standard No. TS 10108 Fire Department -Rules of Fire Statistics (Date: 08.04.1992) (Annex-18)</li> </ul> <p><b>REFERENCES:</b></p> <ul style="list-style-type: none"> <li>- Implementation Guideline of Developing Preventive and Protective Fire Service Standards</li> </ul>			
<b>RELATED UNITS</b>			
<ul style="list-style-type: none"> <li>• MoI</li> <li>• MoEUCC</li> </ul>			

- MMs
- TSE

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
3.2	<p><b>Administration principles of fire department response units</b></p>	<p>The time of a successful operational activity in fire services is closely linked to whether response is carried out timely and with the right staff and vehicles. This is a process that starts with the receipt of fire notice and includes the arrival of teams and vehicles at the fire scene, their response, and return to the home station. This process should be carried out within a system. This standard aims to apply all these processes and systems at national level.</p> <p>TS 9871 and TS 12206 standards previously published on this issue should be updated to current circumstances.</p>	<p>It is aimed to determine necessary administration rules for the fire response units to respond to incidents within the shortest time and escape with minimum damage.</p> <p>This includes the management of activities beginning from the receipt of notice in fire station following to receive call for any incident in the jurisdiction of fire departments to sending relevant team to scene, informing officer of assigned unit and going back to fire station after completing response action.</p> <p><b>Rules to be paid attention to:</b></p> <p>112 Emergency Call Centres;</p> <ul style="list-style-type: none"> <li>- It is necessary to receive the notice and register (Fire Notice Form).</li> <li>- It is necessary to identify location and type of incident.</li> <li>- It should be ensured that the related team is forwarded in compliance with the condition of the incident.</li> </ul>

			<ul style="list-style-type: none"> <li>- It should be ensured that the team will arrive on scene within the shortest time.</li> <li>- It is necessary to identify closest water sources.</li> </ul> <p>Organization of scene and response;</p> <ul style="list-style-type: none"> <li>- It is necessary to place the fire departments vehicles in the most convenient and safe position that is the closest to the scene.</li> <li>- It is necessary for security guards to ensure safety of the scene and not allow individuals who are not on duty to enter into scene.</li> <li>- It is necessary to place the emergency medical intervention team in the most convenient and safe position that is the closest to the scene.</li> <li>- It is necessary to respond to the incident by prioritizing rescue.</li> <li>- It should be ensured that injured individuals, if any, are delivered to emergency medical intervention team.</li> <li>- It is necessary to examine the scene in detail, take necessary notes, take photos and record video, if necessary for incident report, after the intervention is completed.</li> <li>- It is necessary to collect required data on scene, the user and owner.</li> <li>- If there is any death in the incident, it should be ensured that officer on the scene gives necessary</li> </ul>
--	--	--	--

			<p>information to the Public Prosecutor who arrives on the fire scene.</p> <p>- After the provision of necessary information and documents for fire report, the scene is left to the security forces and fire department goes back to the fire station.</p> <p><b>The fire report should include the following points:</b></p> <p>Name, surname and telephone number of the notifying person, time of notice address of the scene, type of the incident, number of floors in the building where the fire started, number of people living in the building where the fire started, and their gender, the time when the response team arrived on scene, number of tools, equipment and personnel of the fire department on the scene, owner of the scene, availability of fire insurance of the fire scene, time of the response works, the reason why the fire started, damage control of burned materials, species and conditions of the living creatures who had an accident during fire, the time when the fire department went back to the station.</p>
<b>LEGISLATION, TSE STANDARD</b>			<ul style="list-style-type: none"> <li>• Regulation on Municipal Fire Department (OG of 21.10.2006, issue 26326) (Annex-4)</li> <li>• Standard No. TS 9871 Fire Department – Governing Principles on Fire-Related Disasters (Date: 18.02.1992) (Annex-19)</li> <li>• Standard No. TS 12206 Fire Department - Organization and Training (Date: 09.04.1997) (Annex-10)</li> </ul>

**REFERENCES:**

- Recommendation for standard no. 3.3.1 on Criteria for Compiling and Collating Fire Statistics included in the guideline

**RELATED UNITS**

- MoI
- MoEUCC
- MMs
- TSE

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
3.3	<b>Considerations to provide operational effectiveness</b>	For effective response planning within the area of service, - Possible risks (R) - Means to be used in controlling those risk (M) (means should be defined as staff, vehicles, and equipment here) - Time to employ the means (T) - Rate of success (A) (activating the operational means to be used and respect to the maximum response time to be respected) - Operational effectiveness can be evaluated as a function of these four factors: f(R,M,T,A).	It is aimed to provide contribution to create an assessment tool in the measurement of intervention service efficiency and make service planning based on real data.  Operational effectiveness may be considered as a function of the following four factors (f(RFDS)) in the area within the boundaries in which service is provided in an effective response planning; - Possible risks (R)  - Means to be used in controlling those risk (M) (means should be defined as staff, vehicles, and equipment here)

		<ul style="list-style-type: none"> <li>- These factors are derived from experience (statistics and reports), scientific research (technical knowledge on fires), and economic profitability assessments.</li> </ul> <p>In addition, the following should be considered as properties of fires:</p> <ul style="list-style-type: none"> <li>- Fire progress rate,</li> <li>- The involvement of the environmental factors accompanying it,</li> <li>- And the fact that thermic events may take place.</li> </ul>	<ul style="list-style-type: none"> <li>- Time to employ the means (T)</li> <li>- Rate of success (A)</li> </ul> <p>(Activation of operational facilities to be used and compliance with maximum response time to be complied with)</p> <p>These factors are obtained from experiences (statistics and reports), scientific research (technical information of fire), economic profitability evaluation.</p> <p>It should be paid attention to;</p> <ul style="list-style-type: none"> <li>- Fire progress rate,</li> <li>- Involvement of the environmental factors accompanying it,</li> <li>- And the fact that thermic events may take place.</li> </ul> <p>A classification should be created while categorizing the region to be delivered the service into risk groups considering local characteristics. This region can be separated into small parts both directly through quadrature method or according to risk characteristics. These characteristics include parameters such as population, population density, urban and rural nature, structure type (spaced, adjacent, detached, apartment, high-rise), residential purpose, commercial-industry oriented etc.</p>
--	--	---	--

**LEGISLATION, TSE STANDARD**

**REFERENCES:**

- Comparative Assessment Report About EU Practices in Fire Services, UNDP, 2021.

**RELATED UNITS**

- Mol
- MMs
- TSE

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
3.4	<b>Considerations for determination of response time</b>	<p>Response time is the basic parameter for assessing the effectiveness of fire response services and preparing response plans (see standard no 3.3). The yearly average of fire response times is not enough to calculate the optimal response time (the time for the first response to be made after receiving the fire notice). When measuring the response time:</p> <ul style="list-style-type: none"> <li>- The field of responsibility should be defined and the land area should be specified.</li> <li>- The location of fire stations should be carefully considered.</li> <li>- The means to be used in response should be considered.</li> <li>- Response time should be defined for rural and urban areas.</li> </ul>	<p>Response time is both a significant performance indicator for the efficiency of response service of fire department and a basic parameter in planning of the response services. With this standard, it is aimed to contribute to practical calculation of response time as much as possible and, in this regard, to the service planning of fire department.</p> <p>In this respect, it should be paid attention to the following points in the determination of response time:</p> <ul style="list-style-type: none"> <li>• Identification of response field and its surface area</li> </ul>

			<ul style="list-style-type: none"> <li>• Location of fire department</li> <li>• Access to the facilities to be used in response</li> <li>• Rural and urban areas</li> </ul> <p>It is necessary to classify the response field by classifying risk categories to be able to use response time in response planning.</p> <p>Risk-based operation planning involves;</p> <ul style="list-style-type: none"> <li>• Rating risks exposed in the service area</li> <li>• Analysis of information gained through experiences</li> <li>• Identification of operational facilities for each risk group</li> <li>• Determination of response times.</li> </ul> <p>While separating service areas into regions in terms of risk grades;</p> <ul style="list-style-type: none"> <li>• Population parameters: These include population, population density (population/km<sup>2</sup>), urban or rural structure of the region. Seasonal population changes (summer/winter) are taken into consideration and calculated separately for summer and winter.</li> <li>• Building type inside the service area: It is possible to address the parameters of spaced/adjacent, business/home, architectural features (historical</li> </ul>
--	--	--	--

			<p>structure, wooden structure), number of floors, squatter house/ordered structure.</p> <ul style="list-style-type: none"> <li>• Areas where critical structures are: Areas where hospital, penitentiary, industrial risk, ports, airports, nursing homes, public buildings and high-rise buildings are evaluated separately and it is prescribed to activate more facilities.</li> <li>• If the fire departments also involve the volunteers, the status of the personnel is taken into consideration in the organization of response facilities in terms of risk classes.</li> </ul>
<b>LEGISLATION, TSE STANDARD</b>			
<p><b><u>REFERENCES:</u></b></p> <ul style="list-style-type: none"> <li>- Comparative Assessment Report About EU Practices in Fire Services, UNDP, 2021.</li> <li>- Implementation Guideline of Development of Preventive and Protective Fire Service Standards</li> </ul>			
<b>RELATED UNITS</b>			
<ul style="list-style-type: none"> <li>• Mol</li> <li>• MMs</li> <li>• TSE</li> </ul>			

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
3.5	<p style="text-align: center;"><b>Coding of fire department vehicles according to the type of service and determination of equipment and material required in these vehicles</b></p>	<p>Many vehicles and equipment of various specifications are used for fire services and the current equipment is being updated to the circumstances. In the Comparative Country Report, the equipment, tools and materials used by fire departments in European countries were classified with a code and type of equipment that should be on board each type of vehicle was specified at national level. This will be useful in ensuring service standard, inspecting whether the standard is being observed, and making comparisons between current vehicle stocks. In the Current Situation Analysis Report, it is seen that Türkiye's lack of such coding does not allow an effective, comparative assessment on fire vehicle and equipment stocks at city, province or national level. For example, the content of the code TLF represents a fire truck loaded with water and foam, the code DLK represents a fire truck with a ladder, and the code RW2 represents a heavy fire rescue vehicle with a crane at the front and back. Coding and loadout lists unique to Türkiye should be defined using these examples. A standardization work should be undertaken to determine the coding and the loadout to be loaded to each vehicle based on each code will significantly facilitate things for vehicle and equipment producers as well as users in Türkiye.</p>	<p>Through the determination of what kind of equipment should be available in which type of vehicles, as a standard at national level, it is aimed to contribute in order to inspect whether it is complied with the service standard or not and, make evaluation and comparison on available vehicle stocks.</p> <p>The standard study to be conducted for coding and determination of equipment to be loaded to vehicles through each code will provide significant facilities for producers and users of vehicles and equipment in Türkiye.</p> <p>In this respect;</p> <ul style="list-style-type: none"> <li>• It is possible to give the code names to the vehicles by separating into the service classes.</li> <li>• It is ensured that the vehicles are separately standardized through the determination of amount of water and foam that should be available in each code-designated vehicle, water pump flow rate, materials and equipment that should be loaded to the vehicle.</li> </ul> <p>For example, in accordance with European practices, TLF code refers to fire truck loaded with water and foam, DLK code refers to fire truck with ladder, RW2 code refers to heavy-duty rescue vehicles with crane</p>

			at its front and back. It is recommended to determine a coding system and loading lists specific to Türkiye by benefiting from these examples.
<b>LEGISLATION, TSE STANDARD</b>			
<ul style="list-style-type: none"> <li>• Regulation on Municipal Fire Department (Article 42) (OG of 21.10.2006, issue 26326) (Annex-4)</li> <li>• Standard No. TS 12206 Fire Department- Organization and Training (Date: 09.04.1997) (Annex-10)</li> </ul>			
<b>RELATED UNITS</b>			
<ul style="list-style-type: none"> <li>• MoEUCC</li> <li>• MMs</li> <li>• TSE</li> </ul>			

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
3.6	<b>Considerations for daily maintenance of vehicles and equipment of fire department and preparation of test forms</b>	Although functioning and availability tests for equipment and vehicles used in fire departments are carried out daily, it is known that a number of problems may occur when different shifts hand over the vehicles and equipment to each other due to failure to follow a certain checklist or standard format. It is necessary to organize standard checklists and hand-over forms in order to partially or fully remove these problems.	<p>It is aimed to keep response vehicles and equipment available for duty all the time which is also one of the most fundamental functions of fire departments.</p> <p>It is known that the tests are daily conducted on the operation and readiness of vehicles and equipment, however, as these tests are not conducted through a specified check list or a standard format, personnel of different shifts may experience various problems while handing over the vehicles and equipment. It is</p>

			<p>necessary to create standard check lists and handing-over forms on this issue to be used in all fire departments at national level to be able to partially or completely eliminate these problems.</p> <p>In this respect;</p> <ul style="list-style-type: none"> <li>• Operational test forms are prepared for each vehicle with regard to the operating status of vehicles and equipment that is available on each vehicle.</li> <li>• This test form includes information of vehicle gauge, engine oil, drive belts, shaft and front mechanism connections, windshield washer fluid, windshield wipers, engine coolant, battery and starter, all illumination lights, siren, brake and tires, chassis and bodywork, water pump pressure, ladder and its basket if it is a vehicle with ladder, outriggers and security systems.</li> <li>• It is necessary to make inspections and apply short use test on oil, fuel and operating status etc. of all the equipment that is available in the vehicle and used by being operated.</li> <li>• A material inspection form is created for each vehicle. This form includes information of water, foam and all the other materials on the vehicle.</li> </ul> <p>Daily maintenance and test forms should include all of the above-mentioned subjects.</p>
<p><b>LEGISLATION, TSE STANDARD</b></p>			

**REFERENCES:**

- It is possible to take as example the Vehicle and Material Check and Test Forms as well as Material and Equipment Check Forms used in fire departments of some municipalities.

**RELATED UNITS**

- MMs
- TSE

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
4.1	<b>Raising awareness of the public on fire prevention activities and creating training modules to be used in training courses to raise awareness</b>	<p>As in other countries, fire departments in Türkiye organize activities to raise awareness of school-age children about fire protection and prevention. These activities include informing about fire protection and prevention, developing skills and raising awareness. Designing these activities at different levels, and determining their content in a certain format in line with the specified targets will contribute to service quality.</p> <p>The awareness-raising activities should involve different training modules for primary and high school students, adults, seniors, and citizens with disabilities.</p> <p>The following points should be observed:</p> <p>Separating different modules, Setting targets for each module,</p>	<p>It is aimed to create training modules to provide information and skills relating to fire prevention and fire protection and to be used at national level in training courses for raising awareness of the public in fire prevention activities.</p> <p>It will affect the service quality to differentiate awareness-raising activities relating to fire prevention and protection according to certain levels and create the content in compliance with specified objectives in a standard format.</p> <p>The following points are implemented in the preparation of training programme to be followed in training courses and awareness-raising studies to be conducted for citizens;</p>

		<p>Determining the targeted outcome of each module,          Creating different modules and suitable content for each, and specifying the training period.</p> <p>Different pedagogical techniques to be used in the modules, the materials to be used, and the issues and synthesis to consider should be identified.</p>	<ul style="list-style-type: none"> <li>• The target audience is identified (old, disabled, child, student, those living alone, housewife etc.). It is determined according to the fire statistics which population group is prioritized in terms of the training for fire prevention and fire protection in the identification of target audience.</li> <li>• The training is separated into different modules and levels.</li> <li>• The purpose of each module is determined.</li> <li>• Targeted output is determined for each module.</li> <li>• Appropriate content is created in accordance with different modules and time of training courses is determined accordingly.</li> <li>• The methodology is determined in ways that the training courses for adults will include scenarios based on real incidents as much as possible and provide both information and skills to the audience benefiting from the training.</li> <li>• It is indicated the different pedagogical methods and materials to be used as well as the points and synthesis to be emphasized in the module.</li> </ul> <p>Recommended training modules can be created as;</p> <ul style="list-style-type: none"> <li>• Training module to be provided for primary and secondary level students,</li> <li>• Training module to be provided for adults,</li> <li>• Training module to be provided for the elders,</li> </ul>
--	--	--	--

			<ul style="list-style-type: none"> <li>• Training module to be provided for people with disabilities. Training materials that are appropriate for the nature of disability should be used in training programmes of which target audience is people with disabilities (Visual materials, sign language etc.)</li> </ul> <p>Different outputs will be determined for different levels in training to be provided in schools and materials and pedagogics to be able to provide this training.</p>
<b>LEGISLATION, TSE STANDARD</b>			
<b>REFERENCES:</b>			
<ul style="list-style-type: none"> <li>- Comparative Assessment Report About EU Practices in Fire Services, UNDP, 2021.</li> <li>- Implementation Guideline of Development of Preventive and Protective Fire Service Standards</li> </ul>			
<b>RELATED UNITS</b>			
<ul style="list-style-type: none"> <li>• MoEUCC</li> <li>• MMs</li> <li>• TSE</li> </ul>			

NO	STANDARD	REMARKS/NOTES	STEPS IN IMPLEMENTATION GUIDELINE
----	----------	---------------	-----------------------------------

5.1	<p><b>Evaluation of requests, suggestions and claims of citizens</b></p>	<p>All requests, recommendations and complaints concerning all fire services should be monitored and evaluated by fire department managers and responses about their outcomes should be given to citizens.</p>	<p>It is aimed to monitor the service quality.</p> <p>All requests, suggestions and complaints made related to fire services should be monitored and evaluated by the managers and citizens should be informed with feedbacks about the results.</p> <p>If request of the citizen is answered over the internet, it is possible to automatically perform a short-term satisfaction survey.</p> <p>It is possible to prepare a printed satisfaction form for the answers provided in writing.</p> <p>In this respect, it is important to limit the number of questions in the survey and use clear expressions in question patterns.</p> <p>The questions may be related to if it is satisfied with the answering time, content of the answer and the service provided by the fire department regarding the subject of claim.</p>
-----	--	--	--

**LEGISLATION, TSE STANDARD**

- Regulation on 112 Emergency Call Centres' Organization, Functions and Operations (OG of 16.05.2014, issue 29002) (Annex-13)

**REFERENCES:**

- Quality Management System Applications of some municipalities

## RELATED UNITS

- MMs

### 3. Current Situation Evaluation of Pilot Studies

The meetings were held in Balıkesir on 7-8 February and 28-29 March 2022 and in Denizli on 14-15 February and 21 March - 1 April 2022. During these meetings, it was addressed whether the suggested standards were compliant with the current practices, challenges of implementation of the services on the standards and specifications related to local.

#### Standard 1.1. Voluntary Firefighting Definition, Code Of Conduct And Training

Voluntary firefighting practices should be expanded across the country. For this reason, regulation whose definition and implementation are defined clearly, should be prepared and this regulation should be set as an example to the country.

It was seen that the definition was unclear and there were some concerns about its implementation for two provinces in these meetings.

Voluntary firefighting and other emergency voluntaries should be defined and clearly separated and the training and working conditions should be defined in detail even though there is a current volunteering practice in Balıkesir and voluntary firefighting regulation approved by the municipal council. Therefore, a new regulation should be prepared with Denizli MM after revising the current regulation by considering the fields on suggested standards.

It was noted that there were some concerns about voluntary firefighting practices in the first study meeting of Denizli MM. It was seen that these concerns were about volunteers' motivation related to profiles and requests and voluntary firefighting might be viewed as "business doors". However, this assumption shows that definition, content and practices of voluntary firefighting cannot be fully understood so that this causes concerns, restrictions and delays on implementing. Information exchanged in the province visits contributed to a better understanding and showed necessity of the suggested standard.

The purpose defined when suggesting the standards and steps in the Implementation Guideline include information and guidance in order to remove the concerns. Nonetheless, it was concluded that MMs should identify priority profiles when implementing so that this can contribute to both efficiency and consistency of voluntary firefighting, lack of number of high qualified employees and empowerment of the prevention services. Accordingly, the assumptions related to content of firefighting were defined below;

- Civilian volunteers for disasters may be implemented (with rural volunteers to serve as first-responding firefighters),
- Some certain people, such as people who have their own expertise, should be encouraged,
- People who live and work at the buildings which have risk structure may be encouraged to be a voluntary firefighter.

Another problem related to the implementation is validation of the training which is given to the volunteer. It is stated that there are no training centres in every provinces and there are also differences in the training between the districts.

It was concluded that it is important that some provinces and municipalities can undertake the training operations and the training can be staggered rather than 72-hours uniform training given in Balıkesir.

### **Standard 1.2. Minimum Qualifications Of Fire Prevention And Training Personnel Of Fire Department**

There are deficiencies related to the prevention and training personnel in both MMs quantitatively and qualitatively.

There is a shortage of teachers received pedagogical training on both prevention, in-service training and training activities for public, in **Balıkesir**.

The area which firefighting technical personnel are the most evident in **Denizli**, is the fire prevention service area. In the current situation, shortage of isolation, equipment and material knowledge cause a problem on efficiency of the service.

On the other hand, reinforcing with personnel from other units is not an effective solution. For example, technical personnel assigned by an outside institution or other units of the municipality may lack at some points in terms of fire protection because they have no sufficient knowledge and experience on fire protection.

All tasks are defined in accordance with the quality management systems in both municipalities. However, it emerged that Balıkesir MM should define tasks more detailed such as Denizli MM.

They agreed that the personnel candidates should pass the theory exam while training, have practical training if they pass. If they fail, retaking exams should be implemented.

### **Standard 1.3. Principles Of Creating Work Flow Diagram For Fire Prevention And Training Services In Fire Department**

Work flow diagrams about fire prevention services in both municipalities are present. While a work flow diagram related to the training services is present in Denizli, there is no work flow diagram in Balıkesir.

The most important deficiency is caused by not being able to establish work flow diagrams of fire prevention, awareness-raising training services for public.

The training services are only given on request but planning studies on encouraging the training request is highly important to raise the public awareness.

### **Standard 1.4. Inclusion Of Training And Prevention Activities In Performance Indicators**

Current performance indicator of **Balıkesir** does not show number of the fire prevention, training and intervention activities and number of training activities for public, number of target groups. Determining target number of people who will be given training in accordance with the target groups contributes to efficiency of the services because of making possible to analyse municipalities themselves.

Performance indicators of **Denizli** include details of numbers of training sessions on prevention activities, response time of institution audit and intervention team. Performance

indicators of Denizli show number of training activities on prevention, intervention period of monitoring institutions and incident response of the intervention team. However, some improvements can be made by including;

- Number of citizens who will take training on natural disaster, fire and accidents.
- Reaction time to the audit while applying fire report.
- Reaction time of the team after the notice (urban and rural areas may differ, departure from the station may be the same, the arrival may differ.)

On the other hand, fire safety audit is made on request in both two municipalities just as in the whole country as a result of the legislation. There is no audit when there is no request.

### **Standard 1.5. Principles Of Positioning Fire Hydrants**

There are problems related to using hydrants actively in **Balıkesir**. These problems can be summarized such as;

- Accomplishing the positioning of the hydrants' current situation in Geographic Information Systems (GIS),
- And the problems related to water pumps caused by power outage. Alternative water and energy resources do not exist.

In **Denizli**, it was seen that there is no problem on positioning hydrants and number of hydrants in urban and rural area and the hydrants show their active situation at current Geographic Information System (GIS). For example, there are at least two hydrants in every neighbourhood in rural area, DESKI should keep mobile troubleshooting unit in case of a massive fire and 112 emergency services list 30 water reserves of private institutions. The practice of Denizli MM can be generalized as a good practice.

### **Standard 2.1. Implementation Principles Of Vehicle Tracking, Camera And Communication Systems As Well As Software Used In 112 Emergency Call Centre Services Of Fire Department**

Fire services in Balıkesir is included in Province Coordination Board under the governorship (Fire service is the 4th unit which receives the most calls after police, gendarmerie stations and health services and calls in fire services turn out to be incidents the most.) One of the first established 112 emergency services is in Balıkesir. However;

- The coordination problems between the institutions occur in other provinces at times. The basis of these problems is that radio systems of the institutions working in 112 Emergency Call Centre cannot be integrated with each other.

GSM-based radio system is used in the current system of Balıkesir Fire Services. Deviations on locating occurs at times because the nearest cell tower is used for the mobile phones.

- Another problem is that there are no camera systems in firefighting vehicles and stations and failure on intervention occurs because the notified location deviates more than 100 meter due to land structure.

Training deficiency of call takers in 112 Emergency Call Centre causes problems on directing the notice properly on time.

Problems related to technical and finance situations exist due to communication infrastructure in Denizli. These problems are shown below;

Information on the scene can be transferred to the centre through photograph, video and radio with driver and vehicle personnel and the scene can be remotely controlled. However, there is no camera system which will receive the instant information.

The studies on installing cameras to the vehicles is currently ongoing and the requests related to this field were conveyed to the related municipal units.

Another problem is communication due to land structure as the problem in Balıkesir.

There is no problem with 112 Emergency Call Centre in Balıkesir. The Regulation on Emergency Call Centre is prepared across the country and the quality management accreditation of Emergency Call Centre is conducted by Denizli MM. For this reason, problems related to directing calls do not occur. The notice is considered within max. 15 seconds. At the same time, Denizli fire services use the software of 112 Emergency Call Centre.

### **Standard 3.1. Criteria For Compiling And Collating Fire Statistics**

Information of fire reports in both municipalities is the information envisaged by general and minimum legislation and it is unsuitable for planning the fire prevention and protection activities or improving the strategies.

In current situation, limited data (not having reasons why the fire break out and not knowing fire types) in fire reports are collected due to legislation and considered as numerical data and schedules are conveyed to AFAD at the end of the year. Current data are evaluated in a quantitative and general way.

Data cannot be used for planning the services, in addition new data which will be provided information mentioned in suggested standards should be provided.

### **Standard 3.2. Administration Principles Of Fire Department Response Units**

The coordination problems occur due to overlap of job description of other emergency institutions on on-scene operations as overlaps of other fire departments across the country even though fire departments of two provinces can cooperate with related institutions well. These problems are due to the legislation and affect efficiency of the services directly.

The coordination problems will disappear if regulation on 112 Emergency Call Centre is arranged to encompass all the institutions of emergency management. They will act under the instruction of governorship if the coordination problems occurred on emergency on-scene organization with other related institutions, especially, fire services, is included in 112 work flow diagram prepared with instruction of the governorship. Therefore, this will remove all the problems of Fire Department and protect Fire Department.

In addition to this, the training of other units except of fire services is important for the emergency coordination. For example, it is a waste of time on receiving notice and directing it to the teams because of lack of the personnel training in 112 Emergency Call Centre in **Balıkesir**.

Work flow processes of all the activities on intervention (rescuing, intervention on chemical materials, preparing fire report, intervention on traffic accidents) are completed in **Denizli**. Instruction about how to act on-scene is also given.

### Standard 3.3. Considerations To Provide Operational Effectiveness

Lack of knowledge of both municipal fire services makes it difficult to plan data-based operation and affects efficient use of the resources. Comprehensive and multi-tier risk database is not present at the operation area. Level of exposure is high for both provinces.

For example, Balıkesir has multi-tier risk structure when considering its transportation in such wide geography, intense number of tourist visit the city in summer, forests, high risks of earthquake. Balıkesir does not have firefighting system which can analyse the risks. There is an institutional risk map which the municipality collects from other units in every month and consists institutional risks. However, this does not allow fire services to plan personnel, vehicle equipment. There is Geographic Information System (GIS) that the fire services start and improve.

**Denizli** has also multi-tier risk structure (population shifts due to tourism, industrial zone, earthquake, forest, landslide, risks related to agricultural activities, floods.)

Geographical Information System (GIS) exists but it does not mean that it is a parameterized information system. Denizli needs to improve a software which will collect all data throughout the province and also be benefitted from current databases.

A software that can collect all data does not exist throughout two provinces. The data should be established as both province-based and district-based.

### Standard 3.4. Considerations For Determination Of Response Time

Distribution and temporal changes of the population density in two provinces differ.

Population changes occur drastically in **Balıkesir** province in winter and summer due to tourism. Population of the rural area is more than the population of the urban area in Balıkesir. It is difficult to comply with the optimal response time in rural area. Voluntary firefighting practice which will be effective on defining the response time in rural areas should be expanded more. In the current practice, 945 neighbourhoods out of 1130 neighbourhoods are located in the rural area and water tankers are the first that intervened to the fire and voluntary firefighting team is present in 777 neighbourhoods out of 945 neighbourhoods. The fire department gave voluntary firefighting training to 3846 people. Currently, mobile fire stations are used.

60% of 624 neighbourhoods is located in the rural area of **Denizli**. Water tankers were distributed to priority neighbourhoods in risk and the obligation for this task was given to the mukhtars.

Planning number of personnel in accordance with scale of the area is present and plannings should be conducted by considering other parameters.

It was seen that it would be helpful if voluntary firefighting practice which would be effective on defining the response time in rural area was started in both provinces.

### **Standard 3.5. Coding Of Fire Department Vehicles According To The Type Of Service And Determination Of Equipment And Material Required In These Vehicles**

Vehicles were coded in accordance with communication system among themselves in two provinces but this does not comply with reflecting the vehicles' qualifications and suggested standards. Establishing common vehicle coding system in the pilot studies will contribute to implement a standard which can expanded across the country.

A consensus emerged that coding vehicles according to the service and listing required equipment for the vehicles by identifying which one was needed would make it easier on planning activities, on-scene organization, and tracking the vehicles and equipment. It was noted that coding priority vehicles in first stage and coding other vehicles in later stages would be suitable.

### **Standard 3.6. Things to Consider on Preparing Daily Control and Test Forms of Fire Vehicles and Equipment**

In this standard, it was noted that the definitions of test and maintenance should be clarified and it was determined that the concept of control should be used instead of maintenance. The test defines the controls on functioning of the vehicle.

Control and test forms are present as daily and weekly forms in **Balıkesir**. However, it may be seen that some situations cannot comply with the quality management system. 6-months and 1 year forms are missing in the practice.

The personnel has also machine repairs certification and inspections are conducted on this subject at certain times.

In-service training on testing the vehicle and equipment, control should be given to the personnel.

Periodic control scales are present in **Denizli** and the daily control means "chassis, leakage etc." control operations.

There are schedules as three groups;

- Schedule related to vehicles which have technical qualifications,
- Daily schedule of the vehicles,
- Daily schedule of the equipment.

Written instruction for use is given for critical equipment in Denizli.

However, daily, weekly, monthly schedules does not exist.

### **Standard 4.1. Establishing Training Modules Which Will Be Used on Public Awareness and Awareness-Raising Training on Fire Prevention Activities**

Awareness-raising studies are currently done in both fire departments of two provinces. However, target groups should be diversified and the training module should be established by determining it level by level. The training modules could not be improved for weak groups.

Studies on training conducted before the pandemic is present but it was interrupted because of the pandemic in **Balıkesir**. Given training in accordance with features of the schools, certain structures and use (prison, hospital etc.) are present on the studies of awareness-raising.

The training is given on request in Denizli. The training modules could not be improved for the weak groups and precise areas.

For this reason, it was concluded that;

-Studies on awareness-raising should be conducted for critical building occupants requesting the training.

-Suitable training modules should be established by defining the special groups.

### **Standard 5.1. Reviewing Request, Suggestion and Complaint of The Citizens**

The functioning of service delivery will set an example and can be improved by two municipalities.

In Balıkesir, complaints are delivered to the fire department in three ways:

- Requests
- Call centre (phone)
- CIMER

- The white desk (helpdesk) and call centre deliver the requests to the related institution. The related institution considers the requests and informs the call centre. The call centre heads back to the person who has complaints. An excel program is used by the units and everyone in the units records the transaction they did on this excel program.

- The call centre makes satisfaction survey among these transactions and it is stated that percentage of the satisfaction is 98%.

- Authorized person of the institution and the participators evaluate it with the sealed envelope after the training ended. Afterwards, they deliver it to the fire department and division head of the fire department makes the necessary evaluation.

In addition to Balıkesir, the data are collected from social media in **Denizli** and the practice was included in quality management systems of Denizli MM.

## **4. Standards Complied As a Result Of Pilot Studies, and Activities To Be Undertaken**

The following section provides information on the standards complied as a result of pilot studies and activities to be undertaken in two provinces.

## STANDARD 1.1. Voluntary Firefighting Definition, Code Of Conduct And Training

	<b>BALIKESIR</b>	<b>DENIZLI</b>
<b>Activity after the first meeting</b>	<p>Voluntary Firefighting Regulation of Balıkesir MM <i>re-evaluated in the light of studies and suggestions. Draft studies of new voluntary firefighting regulation was started. These studies include defining clearly the content of voluntary firefighting considering the complexity of the contents, ethic codes, training subjects, children and young firefighter clubs, training criteria, defining the times of theoretical and practical training, shape and content of the firefighter identification card, taking the policy of personal accident , providing the health reports.</i></p>	<p>Voluntary Firefighting Regulation of Balıkesir, Kocaeli, Antalya MMs and MoEUCC was reviewed and common voluntary firefighting regulation was started to prepare with Fire Department of Balıkesir MM and studies are currently conducted.</p>
<b>Measures and activities to be implemented in future</b>	<p>The draft “Voluntary Firefighting Regulation” will be prepared as a result of collaboration of Fire Departments of Balıkesir and Denizli MMs. The regulation prepared as a result of the collaboration will be implemented after it is approved by Balıkesir MMC.</p>	<p>The draft “Voluntary Firefighting Regulation” will be prepared as a result of collaboration on Fire Departments of Balıkesir and Denizli MMs. The regulation prepared as a result of the collaboration will be implemented after it is approved by Balıkesir MMC.</p>
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Regulation on Voluntary Participation in Services of Special Provincial Administrations and Municipalities (OG of 09.10.2005, issue 25961) (Annex-3)</li> <li>• Regulation on Municipal Fire Department (OG of 21.10.2006, issue 26326) (Annex-4)</li> <li>• Voluntary Firefighting Regulation of Balıkesir MM (Annex-5)</li> <li>• Voluntary Firefighting Regulation of Kocaeli MM (Annex-6)</li> <li>• Voluntary Firefighting Regulation of Antalya MM (Annex-7)</li> </ul>	

- Regulation On Volunteers Working For Forest Firefighting Missions (OG of 11.09.2019, issue 30885) (Annex-8)
- Comparative Assessment Report About EU Practices In Fire Services, 2021, UNDP
- Draft of Voluntary Firefighting Regulation of Balikesir MM (Annex-20)

## STANDARD 1.2. Minimum Qualifications Of Fire Prevention And Training Personnel Of Fire Department

	<b>BALIKESIR</b>	<b>DENIZLI</b>
<b>Activity after the first meeting</b>	<p>Training activities were done for improving the qualifications of current personnel.</p> <p>The training was started by the clinical psychologist (trauma psychologist) who worked under Balıkesir MM on 20 March 2022 and it was planned that all of the fire personnel should benefit from the training. Training was completed as 20 groups.</p> <p>130 personnel working in Fire Department took "Training Program of the Trainer" conducted by Directorate of Public Training and earned right to take the certificate.</p> <p>The request was written to senior management for recruiting technical personnel.</p>	<p>After the first pilot study, 7 people in Denizli completed "Working at height and fire training" approved by the university and took their certificates.</p> <p>The aim is giving the training to the supervisors and foreman and providing at least two or three trainers to every stations.</p> <p>Shortage of the technical personnel is still ongoing and it is unlikely to find a resolution in the short term.</p> <p>In the first place, it was planned that gaps of knowledge of construction and mechanical technicians is removed and this process is still ongoing.</p>
<b>Measures and activities to be implemented in future</b>	<p>Studies which will be conducted on this subject were completed and the request stated the need for technical personnel was delivered to the senior management.</p>	<p>Studies on training the trainers are still ongoing.</p> <p>The training on fire prevention will be given firstly to the technical personnel.</p>

**Inventory of current legislation, standards, guidelines and practices to comply with standards**

- Regulation on Municipal Fire Department (OG of 21.10.2006, issue 26326) (Annex-4)
- Regulation on Protection of Buildings against Fire (OG of 19.12.2007, issue 26735) (Annex-9)
- Standard No. TS 12206 Fire Department – Organization and Training (Date: 09.04.1997) (Annex-10)
- Standard No. TS 9892 Fire Prevention – Fire personnel training – Definitions and Descriptions (Date: 25.02.1992) (Annex-21)
- Job Description of Branch Director of Fire Prevention Service of Denizli MM Fire Department (D35.GT.007) (Annex-22)
- Minimum Competency and Job Description of Branch Director of Fire Prevention Department of Balikesir MM Fire Department (Annex-23)
- Job Description of Supervisor of Fire Prevention Department of Denizli MM Fire Department (D35.GT.015) (Annex-24)
- Minimum Competency and Job Description of Supervisor of Fire Prevention Department of Denizli MM Fire Department (Annex-25)
- Job Description of Institution Audit Service Manager of Denizli MM Fire Department (D35.GT.016) (Annex-26)
- Job Description of Institution Audit Service Personnel of Denizli MM Fire Department (D35.GT.017) (Annex-27)
- Job Description of Supervisor of Fire Prevention Service of Denizli MM Fire Department (D35.GT.022) (Annex-28)
- Job Description of In-house Training Service Manager of Denizli MM Fire Department (D35.GT.023) (Annex-29)
- Job Description of In-house Training Service Personnel of Denizli MM Fire Department (D35.GT.024) (Annex-30)
- Job Description of External Training Service Manager of Denizli MM Fire Department (D35.GT.025) (Annex-31)
- Job Description of External Training Service Personnel of Denizli MM Fire Department (D35.GT.026) (Annex-32)

### STANDARD 1.3. Principles Of Creating Work Flow Diagram For Fire Prevention And Training Services In Fire Department

	BALIKESIR	DENIZLI
<b>Activity after the first meeting</b>	<p>Work flow diagrams related to training services were established as training for in-service and public and work flow diagrams were completed in accordance with classification below:</p> <ul style="list-style-type: none"> <li>-Training in accordance with the requests,</li> <li>-Training in the schools,</li> <li>-Training in in-house,</li> <li>-Training on voluntary firefighting.</li> </ul>	<p>Work flow diagrams of Denizli Fire Department were completed and work flow diagrams of Balıkesir Fire Department will be completed as a result of cooperation with Balıkesir Fire Department.</p>
<b>Measures and activities to be implemented in future</b>	<p>Cooperation related to the work flow diagrams will be continued with Denizli MM Fire Department and completed in future.</p>	<p>The work flow diagrams were prepared and started to record into quality management system.</p>
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Practices of Quality Management System of Balıkesir and Denizli MMs</li> <li>• In-house Training Process of Denizli MM Fire Department (Annex-33)</li> <li>• External Training Process of Denizli MM Fire Department (Annex-34)</li> <li>• Audit Process of Denizli MM Fire Department (Annex-35)</li> <li>• Work Flow Diagram on Prevention and Audit Services of Tekirdağ MM Fire Department (Annex-36)</li> <li>• Work Flow Diagram on Voluntary Firefighting Training Process of Training Department of Balıkesir MM Fire Department (Annex-37)</li> </ul>	

	<ul style="list-style-type: none"> <li>• In-house Training Process of Training Department of Denizli MM Fire Department (Annex-38)</li> <li>• Work Flow Diagram on School Training Process of Training Department of Balıkesir MM Fire Department (Annex-39)</li> <li>• Work Flow Diagram on Training of Training Department of Balıkesir MM Fire Department (Annex-40)</li> <li>• Work Flow Diagram on Fire Report of Training Department of Balıkesir MM Fire Department (Annex-41)</li> </ul>
--	--

<b>STANDARD 1.4. Inclusion Of Training And Prevention Activities In Performance Indicators</b>		
	<b>BALIKESIR</b>	<b>DENIZLI</b>
<b>Activity after the first meeting</b>	<p>The studies on procurement are ongoing for establishing GIS based Fire Information System related to preparation of performance data statics.</p> <ul style="list-style-type: none"> <li>-The studies are ongoing for identifying minimum 3, and maximum 5 performance indicators.</li> <li>-Number of citizens who will benefit from training activities related to natural disaster and fire that will be conducted for public,</li> <li>-Number of institutions that will be given fire safety report,</li> <li>- Arrival time of the team after reporting the notice (In rural and urban areas),</li> </ul>	<p>The studies on identifying minimum 3, maximum 5 performance indicators were started and the cooperation is conducted on this field with Balıkesir Fire Department. The studies are ongoing on:</p> <ul style="list-style-type: none"> <li>-Number of citizens who will benefit from training activities related to natural disaster and fire that will be conducted for public,</li> <li>-Number of institutions that will be given fire safety report,</li> <li>-Arrival time of the team after reporting the notice (in rural and urban areas),</li> <li>-Reaction time to the notice reported by the fire department,</li> <li>-Number of institutions audited etc.</li> </ul>

	-Reaction time to the notice reported by the fire department, -Number of institutions audited etc.	
<b>Measures and activities to be implemented in future</b>	In first place, Balıkesir and Denizli MMs Fire Departments will record the identified performance indicators to the management quality system.	It will be updated by including the identified performance indicators while updating the strategic plan. The identified performance indicators will be included in Quality Management System.
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Regulation on Procedures and Principles for Preparing Strategic Plans, Performance Programmes and Activity Reports in Public Entities (OG of 22.04.2021, issue 31462) (Annex-11)</li> <li>• Sample of Monitoring Performance Indicator Form (Annex-12)</li> <li>• Performance Indicator Ratings in 2021 of Denizli MM Fire Department (Annex-42)</li> <li>• Performance Indicator Ratings in 2021 of Denizli MM Fire Department (Annex-43)</li> </ul>	

<b>STANDARD 1.5. Principles Of Positioning Fire Hydrants</b>		
	<b>BALIKESIR</b>	<b>DENIZLI</b>
<b>Activity after the first meeting</b>	95% of situation diagnosis about whether hydrants function or not and locations of the hydrants, was completed. It was activated with the starting of the summer season.	Active and passive locations of the fire hydrants were identified in an interactive way.

<b>Measures and activities to be implemented in future</b>	The studies on procurement are ongoing for establishing GIS based Fire Information System related to preparation of the performance data statics.	Studies on this standard were completed.
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Regulation on Protection of Buildings against Fire (OG of 19.12.2007, issue 26735) (Annex-9)</li> <li>• Standard No. TS 9684 Fire Extinguish – Water Supply Resources (Date: 24.12.1991)</li> </ul>	

**STANDARD 2.1. Implementation Principles Of Vehicle Tracking, Camera And Communication Systems As Well As Software Used In 112 Emergency Call Centre Services Of Fire Department**

	<b>BALIKESIR</b>	<b>DENIZLI</b>
<b>Activity after the first meeting</b>	<p>The studies are ongoing on vehicle tracking systems, camera systems of in and out of the vehicle, communication systems, location notice systems for the notifying person, the system which shows the water supply resources on digital map, and software programs.</p> <p>SMS-based communication is provided over 2G as an alternative.</p>	The procurement process on purchasing cameras for in and out of the vehicle, was started.

<b>Measures and activities to be implemented in future</b>	Process of purchasing camera was started and the procurement process is ongoing.	MM Technical Services Unit procured for purchasing cameras and result of the procurement is awaited.
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Regulation on Establishment, Duties and Working Procedures of 112 Emergency Call Centres (OG of 16.05.2014, issue 29002) (Annex-13)</li> <li>• Work Flow Diagram of 112 Emergency Call Centre of Antalya Governorship (Annex-44)</li> <li>• In-house Work Flow Diagram of Directorate of Response of Balıkesir MM Fire Department (Annex-45)</li> <li>• Process of Fire Response Activities of Denizli MM Fire Department (Annex-46)</li> </ul>	

<b>STANDARD 3.1. Criteria For Compiling And Collating Fire Statistics</b>		
	<b>BALIKESIR</b>	<b>DENIZLI</b>
<b>Activity after the first meeting</b>	The studies on procurement are ongoing for establishing GIS based Fire Information System related to preparation of performance data statics.	The studies are ongoing on establishing data parameters by obtaining data from different platforms.
<b>Measures and activities to be implemented in future</b>	Current fire report will be improved and made compliant with the new regulation because of the changes on articles of Regulation on Municipal Fire Department.	Evaluation studies on new regulation for preparing fire reports were started.
<b>Inventory of current legislation, standards, guidelines and</b>	<ul style="list-style-type: none"> <li>• Regulation on Municipal Fire Department (Fire Report and Fire Notice Form) (OG of 21.10.2006, issue 26326) (Annex-14 and Annex-16)</li> </ul>	

<b>practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Standard No. TS 9870 Fire Department - Operations After the Fire (Date: 18.02.1992) (Annex-17)</li> <li>• Standard No. TS 10108 Fire Department – Rules of Fire Statistics (Date: 08.04.1992) (Annex-18)</li> </ul>
---	--

<b>STANDARD 3.2. Administration Principles Of Fire Department Response Units</b>		
	<b>BALIKESIR</b>	<b>DENIZLI</b>
<b>Activity after the first meeting</b>	The studies on preparing work flow diagrams of call taker, dispatcher and response are ongoing.	Work flow diagrams of call taker, dispatcher and response were prepared.
<b>Measures and activities to be implemented in future</b>	<p>It will be referred by including legal responsibilities on work flow diagrams and tiny explanatory notes.</p> <p>It will be evaluated with Information Processing System whether it has possibility.</p> <p>New work flow diagram will be established from the moment of directing the notice from call taker to dispatcher.</p>	The studies on this standard will be addressed with updating the quality management systems because MM undergoes external audit process on Quality Management Systems.
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Standard No. TS 9871 Fire Department – Governing Principles on Fire-Related Disasters (Date: 18.02.1992) (Annex-19)</li> <li>• Standard No. 12206 Fire Department - Establishment and Training (Date: 09.04.1997) (Annex-10)</li> <li>• Regulation on Municipal Fire Department (OG of 21.10.2006, issue 26326) (Annex-4)</li> <li>• Recommendation for standard no. 3.3.1 on Criteria for Compiling and Collating Fire Statistics included in the guideline, and TS 10108 (Annex-18)</li> </ul>	

### STANDARD 3.3. Considerations To Provide Operational Effectiveness

	BALIKESIR	DENIZLI
<b>Activity after the first meeting</b>	<p>The studies on procurement are ongoing for establishing GIS based Fire Information System related to preparation of the performance data statistics.</p> <p>Almost 900 water tankers were distributed to the neighbourhoods in the rural areas.</p>	<p>High-risk areas related to the fire were identified by all of the supervisors.</p> <p>Data related to the disasters which is obtained from AFAD will be used.</p>
<b>Measures and activities to be implemented in future</b>	<p>Process of collecting risk data is ongoing and procurement process was started for GIS system.</p>	<p>Process of establishing the risk data which will be accounted for input is ongoing when evaluating the risk.</p>
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Comparative Assessment Report About EU Practices in Fire Services, UNDP 2021</li> </ul>	

### STANDARD 3.4. Considerations For Determination Of Response Time

	BALIKESIR	DENIZLI

<b>Activity after the first meeting</b>	<p>Mobile station practices are present. Number of vehicles, equipment and personnel was planned to send to certain areas for traffic accidents.</p> <p>The studies related to public institutions and organizations were completed.</p>	<p>Mobile application related to response time was conducted. 480 water tankers were distributed.</p> <p>Risk plans were completed in five areas. Vehicles and personnel were distributed in accordance with risk areas.</p>
<b>Measures and activities to be implemented in future</b>	<p>Especially, the studies on improving the response plan will be completed for private sector and Organized Industrial Zones.</p> <p>Centre 7-10 minutes (Balıkesir Average 5.57 minutes)</p> <p>Rural 20-30 minutes (15-20 minutes)</p> <p>For example, it will be defined as an aim that Fire department will leave within one minute from the moment of receiving notice and afterwards, arrive to the on-scene within nine minutes after leaving the fire department.</p>	<p>It was determined that personnel should be reinforced to the area while planning to send the vehicles, equipment and personnel to the area.</p>
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Comparative Assessment Report About EU Practices in Fire Services, UNDP 2021</li> </ul>	

**STANDARD 3.5. Coding Of Fire Department Vehicles According To The Type Of Service And Determination Of Equipment And Material Required In These Vehicles**

	<b>BALIKESIR</b>	<b>DENIZLI</b>
--	------------------	----------------

<b>Activity after the first meeting</b>	The studies on vehicle coding related to 3-5 vehicle types were started by Balıkesir and Denizli MM Fire Departments.	The studies on vehicle coding related to 3-5 vehicle types were started by Balıkesir and Denizli MM Fire Departments and the studies are ongoing.
<b>Measures and activities to be implemented in future</b>	The studies on coding are conducted with a cooperation by Denizli and Balıkesir MMs.	Process of coding is ongoing. Afterwards, the coding guideline Labelling and Preparing lists of overloading equipment will be operated.
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Standard No. 12206 Fire Department – Establishment and Training (Date: 09.04.1997) (Annex-10)</li> <li>• Regulation on Municipal Fire Department (Article 42) (OG of 21.10.2006, issue 26326) (Annex-4)</li> <li>• Rapid Response Vehicle ITF-HMA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department (Annex-47)</li> <li>• Multi-purpose Fire Vehicle ITF-ÇMA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department (Annex-48)</li> <li>• Turntable Fire Ladder ITF-MA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department (Annex-49)</li> <li>• Turntable Combine Fire Ladder ITF-MKIA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department (Annex-50)</li> <li>• Water Supply Fire Vehicle ITF-SIA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department (Annex-51)</li> </ul>	

### STANDARD 3.6. Things to Consider on Preparing Daily Control and Test Forms of Fire Vehicles and Equipment

	<b>BALIKESIR</b>	<b>DENIZLI</b>
--	------------------	----------------

<b>Activity after the first meeting</b>	Daily and weekly vehicle and material control and test forms, Personnel's job description forms were prepared.	Daily and weekly vehicle and material control and test forms, Personnel's job description forms are available.
<b>Measures and activities to be implemented in future</b>	The test form and control form were conducted separately by Balıkesir and Denizli MMs with cooperation.	The test form and control form were conducted separately by Balıkesir and Denizli MMs with a cooperation.
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Quality Management System Practices of Balıkesir and Denizli MMs</li> <li>• Weekly Vehicle Control Form of Balıkesir MM Fire Department (Annex-52)</li> <li>• Weekly Materials of the Vehicle Control Form of Balıkesir MM Fire Department (Annex-53)</li> <li>• Daily Vehicle Equipment Control Form of Denizli MM Fire Department (D35.FR.017) (Annex-54)</li> </ul>	

### STANDARD 4.1. Establishing Training Modules Which Will Be Used on Public Awareness and Awareness-Raising Training on Fire Prevention Activities

	<b>BALIKESIR</b>	<b>DENIZLI</b>
<b>Activity after the first meeting</b>	Preparing the studies on training module is ongoing. Training modules on this field will be prepared with the cooperation of Balıkesir and Denizli MMs.	Type of the training was determined in accordance with the area infrastructure and risks of the neighbourhood and the studies on establishing training modules are ongoing.

<b>Measures and activities to be implemented in future</b>	The studies on common training module are ongoing. Special modules will be established by Balıkesir and Denizli MMs for special groups (people with disabilities).	Training modules are prepared on this field with the coordination of Balıkesir and Denizli MMs. Studies on training which are out of the request and given to target groups are conducted. Training module for people with disabilities and defining the materials are still in the planning stage.
<b>Inventory of current legislation, standards, guidelines and practices to comply with standards</b>	<ul style="list-style-type: none"> <li>• Comparative Assessment Report About EU Practices in Fire Services, UNDP 2021</li> <li>• Quality Management System Practices of Balıkesir and Denizli MMs</li> </ul>	

<b>STANDARD 5.1. Reviewing Request, Suggestion and Complaint of The Citizens</b>		
	<b>BALIKESIR</b>	<b>DENIZLI</b>
<b>Activity after the first meeting</b>	Balıkesir and Denizli MMs engage in studies which are good practices in this field and included in the Quality Management System Practices of Balıkesir and Denizli MMs.	Balıkesir and Denizli MMs engage in studies which are good practices in this field and these studies are conducted under the Quality Management System Practices of two municipalities.
<b>Measures and activities to be implemented in future</b>	It is a good practice and included in the Quality Management System implemented by MMs.	The study serves as a good practice in current situation. This study is included in the Quality Management System Practices of Denizli MM.

**Inventory of current legislation, standards, guidelines and practices to comply with standards**

- Quality Management System Practices of Balıkesir and Denizli MMs

## 5. General Evaluation, Conclusions and Recommendations

Fire services which are directly relatable with sustainability of human, creatures' living and the ecosystem are the most important public services provided by municipalities. These services are provided for diversified and outnumbered risks which are associated with the fire but more than the fire and these services establish a wide duty area, need more technical knowledge and qualifications and should comply with the situations which changes constantly. For this reason, fire services are the most required services to define every component of municipalities under certain norms and standards.

*Report of Comparative Country Analysis* from the project outputs shows that studies on norms and standards related to the service are conducted in a national way, experiences and changing conditions of this era point its necessity even though the fire services are mostly seen as local services in the cases of countries assessed and Europe. The activity of the standards is established by the fire unit which is represented by a national unit that minimum specifications are in central level for the whole country. The audit of standards is conducted by this central unit. It is caused by the potential of turning into a disaster and structures of risks incurred. It is also seen that it is caused by necessity of functioning and organization for deficiencies in the local as a result of the experiences, effectiveness of the service and using the exact resources, removing the training and qualification, personnel differences among local administrations. For this reason, the aim is creating the balance considering situations such as same working language and method, technical infrastructure, taking experience and information and make it standard, differences of the country resources that may occur due to the effective and local areas.

The pilot studies conducted in two provinces show that suggested standards can be implemented at local level accompanied by reconfirming the difficulties on providing the needs related to the service delivery occurred in outputs of *Report of Current Situation Analyses*. However, the study will provide important information before the study is evaluated by generalizing with other municipalities because financial, personnel infrastructure and harmonious relations among the local actors and common resolutions may differ from one province to the other.

The most important result of the study is providing effectivity of preventive and protective fire services, which belong to the personnel management and equipment, vehicle qualifications and information infrastructure of the fire departments in quantitative and qualitative way.

Viewed in a quantitative way, reinforcing number of personnel is a must because of the increasing risks, seasonal population changes, wide rural settlement. Recruiting voluntary firefighters which can support professional firefighting teams is a great resolution for this field. This practice is present as a volunteering practice in Balıkesir but this is not present in Denizli. Therefore, suggested standard (1.1.<sup>1</sup>) can remove the hesitations of Denizli MM on this field. This standard contributes to starting of the studies on voluntary firefighting regulation draft which will be set a good practice for other municipalities in the country apart from general voluntary activity implemented and organized with the other actors in an emergency. The standard clearly shows the new voluntary firefighting regulation prepared by two municipalities by considering current examples, and basics and the path followed on the practice. Two municipalities complied with the suggested standard. They will eliminate the problems such as training and validation of training in other provinces, mentioned in the pilot

study meetings, with the new province voluntary firefighting regulation which is currently prepared and will be implemented across the country. Firefighters Union of Türkiye (TİB) should be the main actor on generalizing the study across the country.

Recruiting voluntary firefighters for fire departments will be important for reinforcement of the fire departments with the practice subjected to regulation defined clearly its content and implementation procedure (profile, ethic codes, working conditions, encouraging mechanism and social rights). This reinforcement emerges as a requirement in the rural areas where have population density depending on seasons and at the same time, the problem on recruiting qualified personnel will decrease if people who have professional expertise on firefighting are encouraged on voluntary firefighting for removing the recruiting problem.

Expanding this system in ways that will respond the needs of the country, can be provided by understanding the voluntary firefighting which is priority topic among the discussion topics in the agenda based on this standard, setting its framework clearly, understandability of mechanism and procedures related to the practice and encouraging the employees. Because voluntary firefighting is not a common practice, the content confusion on voluntary firefighting exists, it is not an understandable content among the related public and private institutions and public across the country. Fire departments should have knowledge on delivering information to the related institutions about potential problems of the practice and importance of the practice's contribution, and adopt and analyse the practice. For this reason, conducting a workshop will contribute to consistency of the standard on the practice.

Shortage of qualified personnel is a problem on fire prevention, audit and training services of the two municipalities when the service delivery is evaluated in a *qualitative* way. While these qualified personnel point for qualified technical personnel on fire prevention and audit services, on training services, qualified personnel point for the personnel with pedagogical formation who study on training trainers in-house and training for public. No 1.1, 1.3<sup>1</sup> and 1.4<sup>2</sup> standards will decrease the job procedures, work flow diagrams on each activities, and different implementation procedures conducted by the MDMs. Current studies of the two municipalities comply with the improved standard. In addition, including the stress-reducing training in-house was underlined at the last workshop.

Shortage of qualified personnel on fire prevention and training is such an important problem across the country. Resolutions found locally, especially training the trainer, are possible with local opportunities. However, fire prevention and audit services are the services that require high responsibility and upgraded technical knowledge. In these days, number of fire prevention and training services are more than the number of fire response services of EU practices and EU countries recruit engineers, architects, technical personnel and outsource this service for complicated situations that occur in other countries such as Germany. The standard (1.2) prepared on this field is a basic dimension across the country when considered by the two municipalities. Even though recruiting personnel in-house is seen as a temporary resolution, the situation of the technical personnel is not fully effective because it cannot be evaluated as an area which the fire department is responsible.

Differences of both contents and names in fire conformity report in every province cause different practices of the same service across the country. Statements in the fire report are too general and cause confusion and the practices that are subjected to instructions of other institutions. As a result, understanding and implementing the regulation cause major problems. Therefore, establishing fire audit reports by determining its content and implementation steps in a way that the fire audit reports will not cause different practices

across the country, contributes to the performance of the fire prevention services appropriately.

Aiming to increase number of fire hydrants (1.5) and tracking with information infrastructure (GIS) directly affect the response time (3.4), and especially, this affects largely in rural area. Sample practices related to number of hydrants, its distribution and tracking were improved despite geographical differences in two pilot provinces.

For the services provided by the fire department in qualitative assessment, including work flow diagrams (1.3, 1.4, 1.5) and aims related to the services in quality performance, contributes to follow the strategical aims and in-house evaluation. At the same time, visibility of “invisible” services provided by the fire department will be possible for other units, institutions and organizations. The studies conducted by the two municipalities with the suggested standards set as examples across the country.

Component on delivering the service effectively is improved standards related to planning vehicle and equipment. For this reason, suitable equipment for personnel and activities are directly related to effectivity of the service. The required equipment for the vehicles and its place of utilization should be defined and a common language with vehicle coding should be created. Every province has their own vehicle coding system in the current situation but the plan does not include which vehicle will be used with what kind of equipment and activity. Creating a common vehicle coding and classifying the equipment lists related to these vehicles in accordance with the activities, will contribute to the effective plan. For this reason, the two municipalities started to create a common coding system which will give an opportunity to comparison and evaluation the situation across the country in ways that it complies with the related standard (3.5<sup>1</sup>).

Planning vehicle, equipment and employee in accordance with risk levels and qualifications, is effective on effectivity of the service. Related standards (1.5.<sup>3</sup>, 3.1.<sup>4</sup>, 3.3.<sup>5</sup>, 3.4.<sup>6</sup>) guide how to use data-based local risk analysis. The two municipalities need updatable data that contain technical field used in local risk assessment, and data-bases of other institutions. Data obtained from fire reports in current province practices is limited with the data desired by the legislation since the public institutions have responsibilities. The data should contain information which will be used as data on service planning and organization.

Cooperation with the university especially emerged as a requirement on obtaining fire and technical data. The data which will be used on planning is determinant on statistic data obtained from fire reports (3.1) and planning vehicle, equipment and employee, organization on prevention activities and training activities (4.1<sup>5</sup>).

Another issue is remembering that fire is an important trigger for emergency and the fire department is the main actor of emergency management. The fire department should coordinate with other emergency units in both fire incidents and emergency situations. Connecting regulations on units’ proceedings with each other is important as emergency

---

<sup>3</sup> Standard 1.5. Principles Of Positioning Fire Hydrants

<sup>4</sup> Standard 3.1. Criteria For Compiling And Collating Fire Statistics

<sup>5</sup> Standard 3.3. Considerations To Provide Operational Effectiveness

<sup>6</sup> Standard 3.4. Considerations For Determination Of Response Time

activities require coordination with all units. After receiving the notice, delivering the notice to the related teams, directing the notice properly and functioning of 112 call centre are extremely important for responding on time. For this reason, including the fire department in AÇM regulation prepared by the governorship, defining job descriptions with this regulation will reduce coordination problems between the units in the area and giving training to 112 employees provides directing the notice properly.

Two municipalities comply with tested standards in pilot studies and at the same time, addressing the frameworks of the standards related to service planning and fire prevention services which will remove different practices between the provinces and districts, with the national legislation, and conducting public arrangements should be conducted in order to provide the efficiency of fire prevention and protection services as a different and important public service related to human-creature life. The two municipalities have no problem with improving the tested standards but it is seen that they occasionally have difficulty on coordination problems between the institutions and different interpretations and legislation deficiencies. Therefore, addressing the studies on standards will be helpful with the participation of TSE and especially, related parties of emergency management under a different heading for the whole country and legislation studies.

The pilot studies and province visits held in the two municipalities provide pedagogical findings in order to the studies which will be conducted to improve standards and implement them effectively, and guide for the future studies. The most important findings are;

Sharing the information that studies on the standard can be implemented across the country and are the studies that local conditions are taken consideration, and encouraging the fire department units for participating actively on creating and using the data,

Introducing and discussing the standard contents with both reports and one-to-one workshops,

Providing the participation of the representatives from units, institutions and organizations out of the fire department **who are directly related to the standards.**

## Annexes

Annex-1 Table of Fire Service Standards

Annex-2 Headings Needed For Legislation Upgrade

Annex-3 Regulation on Voluntary Participation in Services of Special Provincial Administrations and Municipalities

Annex-4 Regulation on Municipal Fire Department

Annex-5 Voluntary Firefighting Regulation of Balıkesir MM

Annex-6 Voluntary Firefighting Regulation of Kocaeli MM

Annex-7 Voluntary Firefighting Regulation of Antalya MM

Annex-8 Regulation on Volunteers Who Serve on Forest Firefighting

Annex-9 Regulation on Protection of Buildings against Fire

Annex-10 Standard TS 12206 Fire Department- Establishment and Training

Annex-11 Regulation on Procedures and Principles for Preparing Strategic Plans, Performance Programmes and Activity Reports in Public Entities

Annex-12 Sample of Performance Indicator Monitoring Form

Annex-13 112 Regulation on Establishment, Duties and Proceedings of Emergency Call Centres

Annex-14 Regulation on Municipal Fire Department – Fire Report

Annex-15 Regulation on Municipal Fire Department – Fire Statistics Form

Annex-16 Regulation on Municipal Fire Department – Fire Notice Form

Annex-17 Standard TS 9870 Fire Department – Operations After Fire

Annex-18 Standard TS 10108 Fire Department – Codes of Fire Statistics

Annex-19 Standard TS 9871 Fire Department – Governing Principles on Fire-Related Disasters

Annex-20 Draft of Voluntary Firefighting Regulation of Balıkesir MM

Annex-21 Standard TS 9892 Fire Protection – Training of Fire Department Personnel – Definitions and Descriptions

Annex-22 Job Description of Branch Director of Fire Protection Services of Denizli MM Fire Department (D35.GT.007)

Annex-23 Job Description and Minimum Competency of Personnel of Fire Protection Services of Denizli MM Fire Department

Annex-24 Job Description of Supervisor of Fire Protection Services of Denizli MM Fire Department (D35.GT.015)

Annex-25 Job Description and Minimum Competency of Supervisor of Fire Protection Services of Denizli MM Fire Department

Annex-26 Job Description of Institution Audit Services Manager of Denizli MM Fire Department (D35.GT.016)

Annex-27 Job Description of Institution Audit Services Personnel of Denizli MM Fire Department (D35.GT.017)

Annex-28 Job Description of Training Supervisor of Denizli MM Fire Department (D35.GT.022)

Annex-29 Job Description of In-house Training Service Manager of Denizli MM Fire Department (D35.GT.023)

Annex-30 Job Description of In-house Training Service Personnel of Denizli MM Fire Department (D35.GT.024)

Annex-31 Job Description of Off-site Training Service Manager of Denizli MM Fire Department (D35.GT.025)

Annex-32 Job Description of Off-site Training Service Personnel of Denizli MM Fire Department (D35.GT.026)

Annex-33 In-house Training Process of Denizli MM Fire Department

Annex-34 Off-site Training Process of Denizli MM Fire Department

Annex-35 Audit Process of Denizli MM Fire Department

Annex-36 Work Flow Diagram on Prevention and Audit of Tekirdağ MM Fire Department

Annex-37 Work Flow Diagram on Voluntary Firefighting Training Process of Training Department of Balıkesir MM Fire Department

Annex-38 In-house Training Process of Training Department of Denizli MM Fire Department

Annex-39 Work Flow Diagram on School Training Process of Training Department of Balıkesir MM Fire Department

Annex-40 Work Flow Diagram on Training of Training Department of Balıkesir MM Fire Department

Annex-41 Work Flow Diagram on Fire Report of Training Department of Balıkesir MM Fire Department

Annex-42 Performance Indicator Ratings in 2021 of Denizli MM Fire Department

Annex-43 Performance Indicator Table of Balıkesir MM Fire Department

Annex-44 Work Flow Diagram of 112 Emergency Call Centre of Antalya Governorship

Annex-45 In-house Work Flow Diagram of Directorate of Response of Balıkesir MM Fire Department

Annex-46 Process of Fire Response Activities of Denizli MM Fire Department

Annex-47 Rapid Response Vehicle ITF-HMA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department

Annex-48 Multi-purpose Fire Vehicle ITF-ÇMA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department

Annex-49 Turntable Fire Ladder ITF-MA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department

Annex-50 Turntable Combine Fire Ladder ITF-MKIA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department

Annex-51 Water Supply Fire Vehicle ITF-SIA in Vehicle Code and Material Overloading List of Balıkesir MM Fire Department

Annex-52 Weekly Vehicle Control Form of Balıkesir MM Fire Department

Annex-53 Weekly Materials of the Vehicle Control Form of Balıkesir MM Fire Department

Annex-54 Daily Vehicle Equipment Control Form of Denizli MM Fire Department (D35.FR.017)