Take Step 1 For a Safe Life!

Istanbul Seismic Risk Mitigation and Emergency Preparedness Project
ISMEP

Disaster Emergency Aid Planning Guide for Educational Institutions

ISTANBUL AFAD
PROVINCIAL DISASTER AND EMERGENCY DIRECTORATE

"Disaster Preparedness Training Materials for Community" which are financed in the framework of 4784-TU numbered contract of loan from World Bank and conducted by Istanbul Special Provincial Administration Istanbul Project Coordination Unit (IPCU) within the A component of "Istanbul Seismic Risk Mitigation and Emergency Preparedness Project" (ISMEP) are prepared by Beyaz Gemi Training and Consulting.

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Dear residents of Istanbul,

Istanbul is a city, which is under the threat of earthquakes and many other disaster risks. In many parts of the world, precautions are taken and some preparation plans are carried out against these kinds of risks. In Turkey, there are studies, which aim at the protection of public buildings, particularly schools and hospitals, and historical monuments and there are retrofitting studies for the whole infrastructure system, especially for transportation and communication, with the participation of the professionals in our country by evaluating the studies made in developed countries.

Physical retrofitting studies have the aim of eliminating the physical threats by earthquakes. But the case of earthquake preparedness is not limited with these activities. What's more important is to change our way of life in such a way to be ready for earthquakes and to be more sensitive for our surrounding.

In order to be ready for earthquakes firstly at individual and then at the national level, we should know about earthquakes, we should develop ourselves by having safe life awareness at our home, in our offices and surrounding, we should get training and above all we should become conscious about what we can do before a possible earthquake strike.

Therefore, we have prepared these awareness raising and training materials to reach you by the means of ISMEP (Istanbul Seismic Risk Mitigation and Emergency Preparedness Project), which is conducted by Istanbul Governorship Provincial Disaster and Emergency Directorate and Istanbul Governorship Special Provincial Administration Istanbul Project Coordination Unit. The documents, which are prepared with the help of specialists from civil and private sectors, are given the last shape after the controls of experts and relevant departments.

Fifteen different training titles have been defined for our editions, which require the preparation of different documents with different themes and appropriate contents for them have been developed to reach all our citizens living in Istanbul and to ensure the institutional preparedness in every sense. We wholeheartedly believe that these training materials which are thought to be appreciated by each institution and individual would meet an important need. Before anything else, to know that our dear citizens would benefit from these activities that would help earthquake preparedness, gratifies us and enlivens our studies.

In Istanbul, where the future is strengthened by us, we share happiness of looking to the future with confidence.

Best regards,
Muammer Güler
Governor of Istanbul

Within the context of Enhancing Emergency Preparedness Capacity, which is the A component of Istanbul Seismic Risk Mitigation and Emergency Preparedness Project, multiple cooperation has a significant role in Community Disaster Preparedness Training Materialsí shaping within the framework of best practice and achieving objectives.

Within the framework of this project, which is a product of long and intensive study, and emerged in the light of profound knowledge and experiences of a good deal of people and institutions, we thank all public corporations and institutions who do not withhold their contributions from us;

Republic of Turkey Prime Ministry 'The Presidency of Disaster and Emergency Management Agency'
Republic of Turkey Prime Ministry Undersecretariat of Treasury and Foreign Trade
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Republic of Turkey Prime Ministry Social Services and Child Protection Agency General Directorate
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Istanbul Metropolitan Municipality
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Kadıköy Municipality
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Bogazici University Kandilli Observatory and Earthquake Research Institute
Earthquake Engineering Department
Disaster Preparedness Education Unit
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Middle East Technical University (METU)
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Union of Municipalities and Straits of The Marmara Region
The Turkish Contractors Association
Union of Building Inspector Companies
Istanbul Chamber of Commerce
Istanbul Chamber of Industry
Turkish Red Crescent Society Training Department
Neighbourhood Disaster Volunteers Foundation
Istanbul Anatolian Side Neighbourhood Disaster Volunteers Association
Search and Rescue Association (AKUT)
Istanbul Union of Chamber of Merchants and Craftsmen
Radio Amateurs Association
Confederation of Turkish Chamber of Merchants and Craftsmen Union
Confederation of Turkish Labor Unions
Social Service Employees Association
Turkish Psychological Association
The Psychiatric Association of Turkey
Turkish Federation for the Physically Disabled
Japan International Cooperation Agency Istanbul Office (JICA)

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Republic of Turkey Governorship of Istanbul
Provincial Disaster and Emergency Directorate

CONTENT

INTRODUCTION

In present day in addition to natural formations, disasters which happen as a result of technological developments, as for all institutions and public parts, for educational institutions create risks, too. It is a fact that the staff in educational institutions and students are under the threat of disasters such as earthquake, fire and flood.

Especially in big cities, risks which will appear as a result of earthquakes and big accidents increase day by day. Like in all fields in education world earthquake thread is spoken for a long time but actions are limited with mostly crisis management and response operations. Operations intended for the post-crisis period are of course necessary but it is never enough for "education continuity together with the security of life and property".

Schools and other educational institutions should manage the risk well by planning disaster emergency aid plans for a probable disaster and emergency. Otherwise if the risk occurs losses and damages might result in catastrophic dimensions. Therefore, these institutions have to take all precautions and prepare disaster emergency aid plan in a correct way for incidents like earthquake, terror and fire.

Experiences in our country and other countries have increased the background information and lead to the dissemination and development of disaster and emergency management. Therefore, revisions of the studies for disasters in educational institutions and the use of new technological and scientific methods like disaster information systems become unavoidable.

In our law and regulation system there are many laws, decree laws, regulations and instructions related to disaster management (See Part 2). Although precautions related to risks are mentioned in them, the risk management is not given the enough places. First of all dealing with risk management is a correct approach in disaster management in order to reduce loss of life and property. In our country studies are mainly tended to the stage of "response" after disasters and only a disaster like an earthquake up to this time whereas the purpose of disaster management is not only practising response exercises like rescuing somebody from debris, taking people to hospital in time or extinguishing. On the contrary, modern disaster management primarily grounds on protecting people from risks that might be seen together with an earthquake and mitigating current risks before disasters occur. In this way, the need for the response exercises will significantly decrease.

In modern disaster management system studies for predisaster protection are named as "risk management". These primarily include the stages of mitigation, preparedness, prediction and early warning and understanding the disasters. Post disaster exercises are named as "crisis management". These include exercises like effect and needs analysis, response, recovery and restructuring (Figure 1).

If required importance is not attached to risk management, crisis management cannot be successful as well. Crisis management which is applied on its own is reactive, inefficient and asynchronous; cannot determine the target group effectively, cannot build trust and cannot prevent a disaster to turn into a catastrophe. For this reason, on aforesaid studies giving priority to the subjects like passing from crisis management to risk management and disaster prevention, mitigation, preparedness, prediction and early warning would be beneficial.

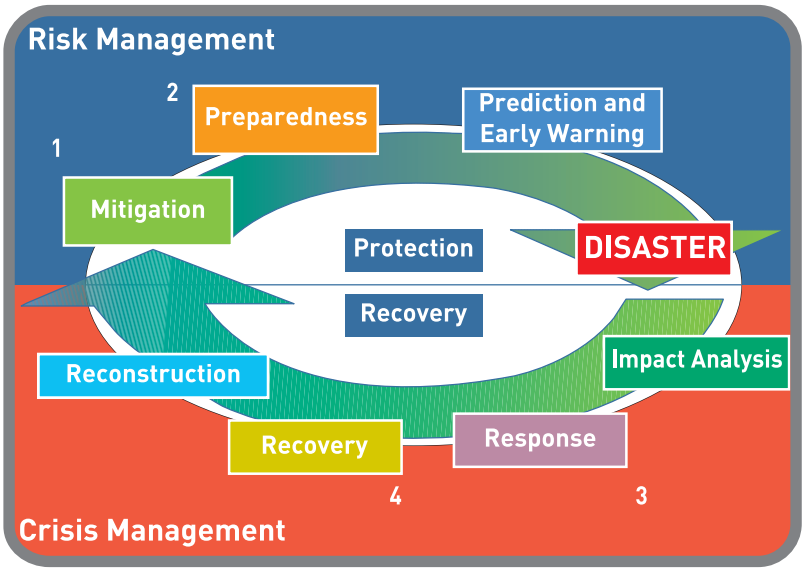


Figure 1. Modern Disaster Management System and its phases.

Not only developing a Disaster Emergency Aid plan against any kind of disasters and proving the security of life and property are important but also providing the education continuity is essential. Therefore, preparedness against any kind of disasters, mitigating the current risks, deciding the authorities and responsibilities and organizing the support sources in educational institutions are extremely important.

This book contains the basic information and examples related to the operations should be done for disaster emergency aid planning in educational institutions.

II. THE PLANNING PROCESS

In order to go through the proper channels in case of a disaster, educational institutions need a Disaster Emergency Aid Plan. For these institutions special risks should be analysed, the dispatch and management of the sources should be handled as a part of a plan within the scope of purposes and principles of disaster management.

You should keep on mind that planning studies are based on a process. Plans should be prepared in such a way that includes probable hazards, necessary things to prevent these hazards, if it appears to minimize its consequences and responsibility and authorities in this stage. Besides that schools have commitments regarding protection of personnel, parents and students. For this reason at first related regulation should be attentively examined before planning.

A school principal, as a disaster management planner, is responsible for ensuring the safety of everyone in school during an earthquake. The most important person is school principal for earthquake and similar disaster preparedness and development of Disaster Emergency Aid Plan in a successful way. His/her support and determination is very significant in terms of providing cooperation of employees.

For the first stage these should be certainly provided by every school when planning:

- To be sure that the students and staff know what to do during an earthquake or similar disasters.
- To determine an evacuation method which is announced to all families and staff.
- In case the telephone system does not work, to have opportunity to contact with local and/or central relief organizations.
- To determine the most serious structural and non-structural risks for life safety and eliminating them as much as possible.
- To train the students and staff to be informed about the school's Disaster Emergency Aid Plan.

Before start planning legal necessities should be reviewed. Nowadays in educational institutions there is no arrangement in regulation which can be taken as a reference with a direct law number for the legal foundations of disaster protection studies. However, in 1999 Ministry of National Education has made an arrangement titled "Psychological Counselling and Guidance Services Instruction which will be applied in disaster times". Basis of this instruction is pointed out as "The disaster law with the law no 222, the law no 1739, the law no 3797, the law no 4306 and the law no 4123".

The laws and regulations related to the things to do during disasters and emergencies are indicated below with their publishing dates and numbers in Official Journal:

The law with regard to the supports by the taken precautions because of contemporary disasters in public life (25 May 1959 dated and 10253 numbered Official Journal).

The regulation numbered 4390 about protection of buildings from fire.

The regulation as Emergency Support Organization and Planning Principals regarding disasters (8 May 1988 dated and 19808 numbered Official Journal).

- Curriculum of Natural Disasters and Disaster Prevention Plans (2506 numbered Notice Bulletin).
- The Civil Protection Law numbered 7126.
- The by law numbered 6/3150 about personal obligation related to Civil Protection, Evacuation and Rarefaction, Planning and Other Services.
- The formation and precautions about civil protection by law numbered 6/3150.

At first you should define how ready your school is for disasters and emergencies. For instance do your staff know what to do in the very first minutes? How will you direct your personnel, students, parents and other visitors?

Although some schools have one or several plans against disasters and emergencies generally these plans are not on the level of international standards. In order to determine the competence of your school's general administration procedures or special disaster planning studies to examine the control risk in Appendix-1 is recommended. If you can say "Yes" to all the questions in Appendix-1 it could be said that your school is ready for a disaster. "No" and "I'm not sure" answers show that your plan has parts needed to be developed. If you say "No" more than one time it means you may encounter with serious problems in a real disaster.

PLANNING STEPS

Disaster management, especially planning, requires team work. In this work getting support of the school management and following a participative approach is fundamental. For this reason, organize a Planning Team in order to start the planning process in your school.

Planning process includes the actions before, during and after the disaster; in other words it should not be thought that it only includes the things to do during a disaster. Predisaster preparations have an influence on the behaviours during and after the disaster. For instance, defining and mitigating the nonstructural risks in a classroom may reduce physical injuries to some extent.

Disaster Emergency Aid Plans have basically three main objectives such as preventing the loss of life and property and providing education continuity. In order to reach these objectives, intermediate objectives are those:

- To be sure about the safety of evacuation routes by checking the primary and secondary effects which a disaster might cause.
- To define the number of staff and student those have reached to the evacuation area.
- To extinguish fires those have just started.
- To mitigate the elements which might create a threat and cause a fire.
- To save confined ones-if there is any-.
- To apply first aid to the personnel and students inside and outside and enable their transport to the hospitals.
- To provide the safety of the school by preventing entrance of parents and suspicious people to school garden or preventing exit of the students.
- In case communication tools do not work, delivering the situation and the requests of the school to the Province Disaster and Emergency Directorate by sending a messenger to the nearest police station or a similar place.
- To deliver the student with identity card control and official report within the testimony of the student and if the process gets longer to provide emergent subsistence.
- To deliver the student, whose parents have not come, to the Social Services' Dormitories with the police accompany.
- To repair simple harms that may occur in the building and installation and eliminate the threats that might arise from them.
- To take security precautions against depredation and plunder or demand for taking precautions.
- After providing the safety of the school staff's families to ensure their presence in the school.
- To make necessary attempts by the Province Disaster and Emergency Directorate for the personnel whose family has been affected from the disaster and to enable their temporary sheltering and subsistence and if it is necessary and if the school has not suffered damage, allowing them to stay in the school rather than tent until their allocation.
- To make necessary work and operations to make the education in the school starts as soon as possible.
- To train the personnel, the students and the emergency teams in order to carry out the services mentioned above, to make necessary planning and to perform them after a probable disaster.

To plan what to do during a disaster will make your students and employees think that disasters are handleable incidents and increase the self-confidence on the subject that they can survive after disasters. After a harmful disaster like an earthquake to think how to carry out drills and how to deal with your students' psychological problems would contribute to your school's continuation of regular process in daily life.

At this point, obvious thing to do is to divide the existing plan into articles. To do that defining hazard elements pertain to your school and giving priority to these articles are significant. To expect carrying out whole plan immediately is not necessary at this stage.

The planning studies, to make schools to "disaster resilient" institutions and to make them "provide continuity" in their educations, can be classified as it follows:

- Organization of teams
- Hazard and risk analysis
- Mitigation studies and planning
- Incident Command and emergency situation services
- Procedures
- Training and exercise
- Mutual Aid/Agreements
- Emergency supplies

PLAN FORMAT

In a Disaster Emergency Aid Plan the pages and parts in Appendix-2 are recommended. You can find explanation of some of these subjects in later parts and some of them on the web-site of Istanbul Province Disaster and Emergency Directorate (HYPERLINK "http://www.istanbuladm.gov.tr" www.istanbuladm.gov.tr).

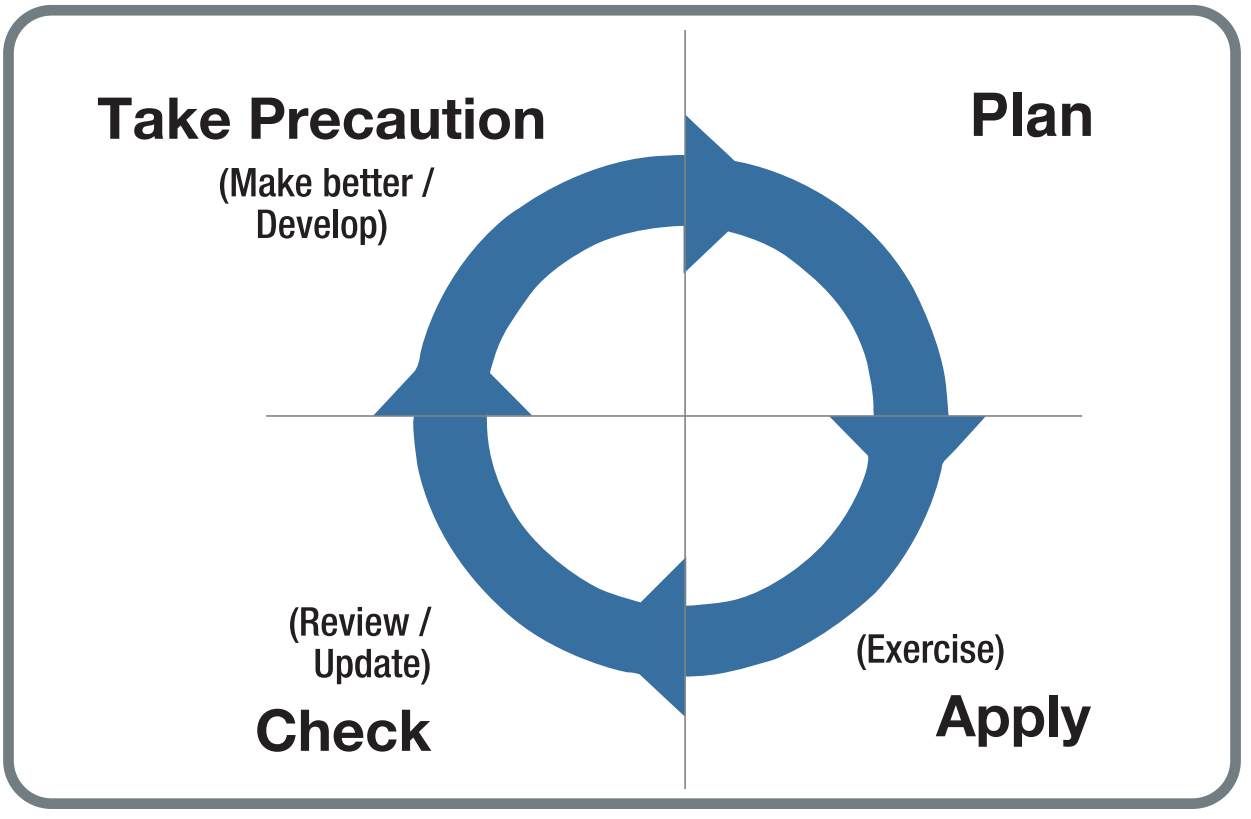
PROVIDING CONTINUITY

Existence of a written Disaster Emergency Aid Plan is not enough alone. This plan should be learned very well and carried out by the officials. At the moment of a disaster or an emergency there can be no time to read the plan; even these plans cannot be reached. For this reason, it is necessary to check and learn the plans by practising them at least two times in a year.

In the committed exercises and annual controls deficiencies and faults of Disaster Emergency Aid Plans should be defined and eliminated. At first applying the solutions within the school's financial possibilities, large scale recoveries can be put into annual investment plans within the control of authorized people like school principal and assistant principal.

An annual working schedule and timetable which organizes the things to do according to priority and importance level should be prepared (Table 1). For instance Disaster Emergency Aid Plans should be evaluated after each training and exercise, and also each year in January annual evaluation of previous year's activities and trainings should be

done. The existing plan should be checked during the annual evaluation of the disasters in the area that the school is located or in other places and then a report should be prepared and given to the managers like school principals and assistant principals.



After evaluating and reporting of existing plans the first budget including expenses like mitigation, training, consultancy and stationery should be prepared.

Disaster Emergency Aid Plans, after preparing and approving them, must be checked periodically and updated with necessary improvements and changes and offered to the relevant authority.

Disaster committee of the school is responsible for preparing plans, developing them with exercises, updating and dividing necessary fund into years, allocating and budgeting.

Preparing a budget, getting contributions of parents by parent-school association, material purchase and keep functioning by maintaining purchased materials is significant.

School: _____

Date	Activity	Authorized Person	Performed Date
September	hazard analysis of school places/facilities	_____	_____
September	Hazard analysis for evacuation routes	_____	_____
September	Updating school sketch/plans	_____	_____
September	Renewing of emergency telephone numbers and related sources	_____	_____
September	Determining personnel and volunteers who have suitable features	_____	_____
September	Researching neighbouring sources and renewing bilateral agreements	_____	_____
September	Sending messages to families	_____	_____
September	Making assignments for disaster management	_____	_____
September	Deciding the transportation routes according to potential hazards	_____	_____
October	Training the personnel and students about disaster management and the plan	_____	_____
January	Review the plan and preparations	_____	_____
February	Giving training of the personnel and students on disaster management and planning	_____	_____
June	Review the plan and preparations	_____	_____

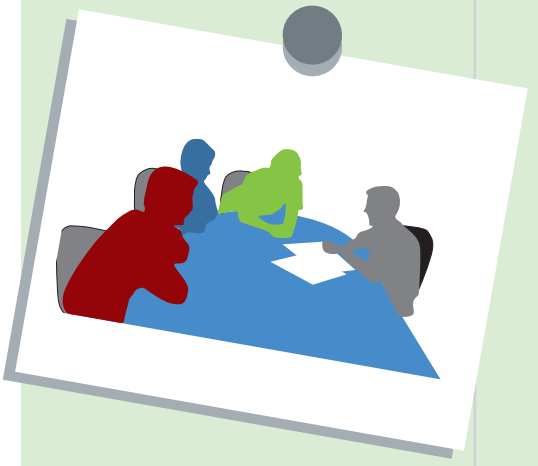
Controller: _____

Date: _____ **Year of education:** _____

III. BEING A TEAM

Disaster preparedness and planning require team work. In this work getting the support of the school management and following a participative approach is fundamental.

Nobody should develop and apply his/her plan on his/her own or copy other plans. Taking team work as a principal, sharing information with co-workers and getting necessary support for planning would ensure the vivacity of your enthusiasm and interest.



DISASTER COMMITTEE

Disaster preparedness and planning start with the awareness of individuals. In other words, without the moral and material support of the individuals a good disaster preparation cannot be made. For a successful disaster plan and its organization, support of the personnel and managers is the first condition. For this reason, in institutions with the participation of representatives and/or managers from all strata "School Disaster Committee" should be established.

Some of authorized people in this committee might not undertake any responsibility at the school during a disaster. So, the committee is mainly responsible for mitigation, whether disaster preparations are made or not, whether planning is made or not and determining whether each significant topic has an official person or not. Disaster Committee will follow the planning studies, observe the exercises and check the trainings at the same time.

Disaster Preparation and planning start with the awareness of individuals.

Main missions of the School Disaster Committee are as it follows:

a. Gathering before the disaster with the invitation of chairman:

- According to regulation and features of the institution, to examine and determine necessary organization, installation, service and precautions, their planning forms and principals for disaster preparedness.
- Assigning necessary personnel to prepare Disaster Emergency Aid Plan according to these principals; examining, completing and after signing these plans offering them to the approval of the authorities through the medium of chairman.

- To coordinate and control the studies for carrying out formation, facility, precautions and education works which are determined with the plans.
- To provide necessary mutual aid and division of labour between the members and departments in those topics.
- To provide necessary collaboration and division of labour for the staff, who work in rescue service, to work with the Province Search and Rescue Association Directorate in case of emergencies in the city or neighbour cities.

b. To check whether responses to the disaster in the first minutes are enough or not, to make necessary preparations against any hazard by examining the precautions and to ensure taking necessary precautions.

c. To take necessary precautions for making the institution functional and replacement of used or lost equipments depending on damaged condition after the disaster.

As in all management systems in disaster and emergency managements school management should believe in the system as well. If school management does not believe in the subject and support studies with a strategic policy, existing system would be deprived of belief and source and the most important thing it would become a disregarded activity even by the exercisers. In this kind of an approach waiting for a good result cannot go further than a dream.

In order to demonstrate the support and undertaking about disaster and emergency preparedness the school management should make a working plan announcement. This announcement;

- Should explain the purpose of the plan and indicate that it includes the whole school.
- Should contain the structure and the authorities of the planning group.

Disaster Committee has to assign a planning team for preparing Disaster Emergency Aid Plan. One of the team members should be the coordinator. Size of the group is related to the necessities, activities and sources of the school. Carrying out tasks as a group would be beneficent in those aspects:

- To make the plan adopted by more people.
- To increase the time and energy spent by the team members.
- To look at the subjects with a broader perspective.

PLANNING TEAM

This team can be created with a school principal or his/her assistant, teachers, staff and parents. Attendance of people to the team who are interested in this subject, can exercise authority, spare necessary time is the best and truest solution.

"Disaster Emergency Aid Plan", which is prepared by planning team through school Disaster Committee, against a probable disaster and emergency, has great importance. This plan will offer predisaster mitigation and precautions for necessary preparations. Besides, methods of protection and response at the moment of a disaster and knowledge that would ensure survival after the disaster will be acquired by this plan. These actions should be fulfilled as separately and as a whole in all departments of the school. So, the relations, tasks, authorities and responsibilities between the departments in the school are going to be clarified by Disaster Management System.

At first it should be determined who is going to be the active members and who is going to be the consultant of the plan. In several applications most of the actions are made by one or two people. But there should be contributions from other departments like senior management human resources, food safety, environmental health and security, public relations and accounting. In other words, members of the planning team should be assigned in written by senior management and their job description should be explained clearly.

Attendance of experts and employees from different departments is a significant and compulsory condition. Disaster committee should direct this planning team and give authority to the group to take all necessary steps during the preparation process of the plan. A clear authority sharing should be established between planning group members and group leaders but this situation would never hinder free opinion sharing.

DISASTER PREPARATION STARTS AT HOME

Personnel who are working during disasters should minimize their anxiety about their family in order to perform their duty in school. In other words, disaster preparedness of schools starts at personnel's home. For this reason, school principals should distribute a Basic Family Disaster Plan similar to the one in Appendix-3 to the personnel and parents, encourage them to fulfil requirements of the plan and take disaster preparedness precautions.

IV. RISK ANALYSIS

Risk analysis starts with hazard analysis. The first steps for hazard analysis are conducting a search meeting with broad participation in the school and making a list of hazards that might cause serious results. At this stage probable hazards around the school and its surrounding, the places that might be affected by them, approximate number of the people, preparations –if there is any- and lacks of departments for these hazards should be determined.

With the widest description accepted by the United Nations "A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own sources" is called as a disaster.

As it could be understood from this description an incident has to cause losses in societies and institutions or affect and hinder human activities like education in order to be a disaster. In other words sometimes a disaster is an expected or unexpected result instead of the incident itself.

Two main factors play a part in a disaster occurrence. The first one is the existence of a hazard and the second one is the existence of a process, institution or living group which would be affected by the risk caused by this hazard. A hazard is everything that has potential to cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental damage. It depends on the taken precautions and risk/hazard mitigation for a hazard not to turn into a disaster and if it does to get through with minimum damage.

Hazards can occur instantly or sometimes give signs beforehand. For instance hazards which are originated from weather conditions, personnel, machine, and equipment can give warnings in advance. In order to prevent these hazards establishing a good follow, control and maintenance system is necessary.

For some possible hazards related to disasters like an earthquake to make a prediction about the time is very difficult. These hazards can be eliminated or their effects can be reduced with taken precautions in advance. That's why existing situation in educational institutions like schools should be analysed well and correctly.

EXISTING SITUATION ANALYSIS

At first internal sources of the school which might be used before, during and after the disaster should be determined. Those can be made on this topic:

- Staff: Determination of the staff who will be assigned in working groups like fire fighting team, first aid team, command centre team, evacuation team, press and public relations team.
- Equipment: Making an inventory of fire protection and fire-fighting equipments, communication equipments, first aid materials, warning/alarm systems and identifying their support system.
- Social and Administrative facilities/ means: Identifying the places and capacities of the departments like City Disaster Management Centre, shelters, first aid centres, health support department in the school.
- Organization: Determining the organization capacity of the school on the topics like education and evacuation plan.

HAZARD ANALYSIS

Some hazards which might be experienced in schools can be listed as below:

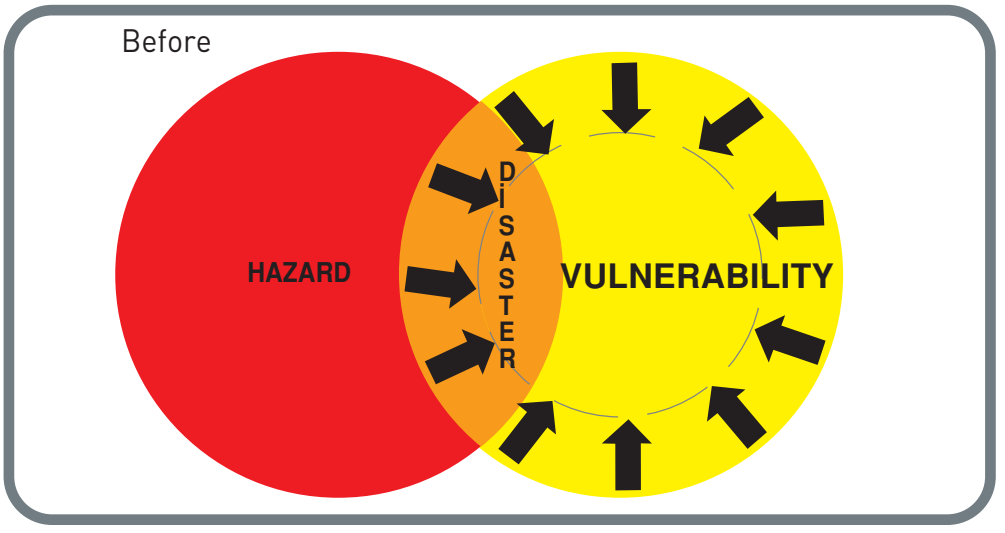
- Gas leakage
- Earthquake
- Fire
- Lightning
- Terror
- Environmental impacts (from neighbouring institution and establishments)
- Adverse weather conditions (flood, storm, air pollution, snow, icing and frost)
- Landslide and avalanche
- Communication troubles
- Emergency Health Conditions (plagues, food poisoning)
- Hazardous substances
- Transportation-service accidents
- State of war
- Judicial cases (kidnapping, theft, etc.)
- Boiler explosion

In "Hazard Analysis" for schools, hazards in Appendix-4 should be absolutely taken into consideration. For each confirmed hazard regarding frequency and influence quantity that might cause, hazard profile forms (Appendix-5) should be prepared. Hazard profile forms should be expanded according to each hazard's possible influence on personnel, place and education. Risk evaluations of these hazards should be made by using hazard profile forms and risk matrix and they should be prioritized.

In addition to all of them you should estimate whether experience of any hazard or its possibility to occur in different areas would pose a hazard for you or not.

Factors that are needed to be considered in hazard analysis are those:

- Size and intensity of the hazard
- Initial speed
- Wind direction and speed
- Temperature and relative humidity rate
- Hydro-meteorological conditions of the region
- Geographical and topographical features



RISK ANALYSIS

Risk analysis forms the basis of Disaster Emergency Aid Plans. A plan should not be prepared before making hazard and risk analysis in an institution. Each school should prepare its own specific "Disaster Emergency Aid Plan" by considering its internal and external risks.

In order to determine the risk that a hazard might cause, vulnerability evaluation should be made. By risk evaluation, to what extent the disasters with different amplitudes cause effect can be guessed. A risk analysis should be about the disasters that might be originated from the existing hazards and how to deal with these risks with available opportunities and sources; in the light of lessons taken from previous experiences new action plans should be developed.

Risk, in the simplest term, estimated bad influences of events which would give harm to people, surrounding, an institution, a work or service. The measurement of loss and harms given to facilities, life and activity is made by grounding on two elements:

Risk = hazard occurrence possibility vulnerability
(state of loss, defencelessness and sensibility)
Or
Risk = (hazard occurrence possibility vulnerability)/ governability

Vulnerability: Exposure level of people, property and services with loss, physical injury and suffer damage in consequence of a hazard influence. This level is measured with relation of distribution of the population, illiterate and defenceless groups, building standards, infrastructure, social, cultural, economical conditions, surrounding, necessary services and impact.

Governability: Hazard minimization level of a community which is affected by a disaster. In this subject main determinative factors are existing institutional systems, readiness, planning, existing mitigation precautions, regulation, early warning and prediction, public awareness, information systems, education levels and participation.

Each school should make these analyses according to its own structure and conditions. There are different methods for risk analysis:

PRIORITIES

After hazard analysis is made, risks should be evaluated for each anticipated hazard. For evaluation of the risks, hazard form in Appendix-5 should be filled separately for place, human being and education continuity subjects.

Risk analysis requires evaluation in certain aspects. These are, apart from the hazard types that influence the region, occurrence level and frequency of these hazards, hazard influences and foresee ability beforehand. When risk analysis is made hazards that threaten all departments of the school and its surrounding together with its garden are considered separately. (Appendix-5) When making evaluation of the form given in Appendix-5, the worst results should be taken into consideration. For instance, although other influences of an event in "disaster" part can be "negligible", its evaluation should be within "disaster" term. When filling hazard profile you can look at Appendix-6 as an example for the influence intensity.

When answering the questions in Appendix-5 for risk analysis it is necessary to obey some principals and explanations. These can be listed as below:

Places might be affected (building, place, room, etc.): In this kind of questions impact area of potential disaster (risk) is meant.

- How much harm will the hazard give and which area will it include?
- Do you think that hazard would affect the whole department in the same way?
- Are there more affected places by this risk (place/room/floor/part)? If there is explain separately and completely.
- If this risk arise from your department (according to features like predominant wind direction, land type, nearness) where is the other buildings and places that might be affected as well?

Total number of would-be affected people: Determine total and possible number of people when personnel, parents, students and guests are together and when the risk is the highest

(like the lesson time in the morning). If the risk is for a certain group (like civil servant, worker) specify them additionally.

Time and Periods: For instance earthquake duration is expressed with seconds; response and recovery can be started immediately after it. But floods last for days so starting the response and recovery studies would take longer time.

Duration: It defines the expectation of how long a hazard would last. Duration is affected greatly by other factors and variables. For instance duration of flood conditions is not only affected by the size and intensity of an event which has caused the flood, it is affected by soil types and soil saturation with water before the disaster, quantity of the ice and/or debris that hinders the flow of water, temperature of the water and the weather at the same time.

Seasonal influences: It defines that in which parts of the year the possibility of an event occurrence is higher. For instance between 1 May and 1 November possibility of a forest fire is higher. Other events might not follow a seasonal period but can be affected by the seasonal features. For instance some chemicals are sensitive to evaporate at authentic temperature level. When some spilled chemical combines with the wind in very hot days, it might create greater influence than in a colder day or a different windy air.

- How long (as hour or day) do you think the risk is or will be effective when it appears?
- Are there specific times and periods of the year that the risk appears? Does the disaster occur periodically?
- In other words does this risk appear in specific seasons? If your answer is "yes" state which month it is.

Formation/ Occurrence speed: "Formation speed" defines the occurrence speed of a hazard. To know the first formation speed of a potential disaster is significant for early warning and response. Formation of river floods can take a couple of days but earthquakes are instant disasters.

Some hazards like significant weather systems can be predicted and followed in following days, too. But developing a warning mechanism for other hazards like an earthquake, a tornado, and a flash flood is very difficult sometimes impossible. Hazards that happen instantly and with limited early warning possibility cause big difficulty for planning team and response personnel.

Signs -if there is any- about the risk formation and early warning system: Early warning system defines whether there is time and method for warning people before the risk appears.

- Can a hazard be predicted beforehand?
- Is an early warning system possible?
- Do you have a special method for early warning of each risk? If there is, explain it.

What are the necessary time and opportunities for human evacuation/emergency aid in your opinion?

- Can evacuating the people from probable places and locating them to secure places protect them?
- Can properties, equipments, documents and so forth be moved or protected?
- Are there enough exit doors and emergency stairways in your building?
- Are the evacuation routes and exits of your building determined and marked?
- Is the meeting place determined in case of the evacuation of your department?
- Are there enough signs for exit doors and fire escapes in your building?
- According to characteristics of your building (exit doors and fire escapes, etc) how much time do you think is required for evacuation of people under hazard in case of a risky situation? (You have to make several exercises for this.)
- How long time does it take you to get support from the services like fire or medical department in case a risk occurs?
- Is it possible to reach instantly to first aiders who will apply first aid to victims in simple health problems?

What are your preparations and/or recommends?: Your personnel should instantly act against emergency. Generally there would be no warning before an earthquake, tornado, explosion or big fires. Prevention of loss of life and property depends on the ability of deciding quickly.

Activities given below might help you to decide what kind of preparation to do and what kind of things to take into account against earthquakes:

- First aid knowledge of the personnel.
- To prepare Disaster Bag (necessary things for the personnel to survive 72 hours alone).
- To prepare first aid kit.
- In order to respond quickly to the calls for help by fire, ambulance and police, names of the buildings and numbers of the streets -if there is any- should be readable and clear.
- To make the personnel learn emergency phone numbers .
- To get fresh water in disaster times.
- To organize search and rescue team.
- To prepare a specific "Disaster Emergency Aid Plan" for the department.
- To know how to turn off electricity and gas units.
- To determine and make everyone learn alternative exit ways when main entrance and exits are unavailable.
- To check the started and previous studies.
- To determine the reasons if you do not have any preparedness.

Risk is the combination of the possibility and results. Choose the risk categories in Table-2 according to your answers in the possibility and result categories above.

Table 2. Matrix demonstrating risk levels

Possibility Category Result Categories	A High possibility	B Sometimes	C Rarely	D Never
Disaster	aA	aB	aC	aD
Critic	bA	bB	bC	bD
Medium	cA	cB	cC	cD
Negligible	dA	dB	dC	dD

According to the confirmed risk level whether the hazards would be taken into consideration in the plan or not should be decided (Table 3).

Table 3. Inclusion of the hazard to the plan according to risk level.

HIGH	Planning is made primarily
MEDIUM	Planning is made at first
LOW	Planning is made
TOO LOW	Planning might not be made

List the risk analysis results as in Appendix-7

Risks levels determined for hazards show weak points of your school as well. Disaster Emergency Aid Plans are prepared according to these priorities.

V. HAZARD MITIGATION

In addition to prepared hazard forms (Appendix-5) hazards which might cause life and property loss and hinder education will be determined by hazard hunting method (Appendix-8). In order to reduce and eliminate harms at this point mitigation plans should be prepared.

Necessary studies for mitigation should start when Disaster Emergency Aid Plan is prepared and put into effect. Some mitigation studies require a long period of time and generalization. For this reason after Disaster Emergency Aid Plan putting into action these studies should continue, as well.

In order to prevent harm and losses of a probable disaster or emergency, you should give priority to the stated protective precautions inside and outside of the school:

- Opening of the class and saloon doors out
- Fastening the moveable objects(wardrobe, computer, etc.), closing the covered ones that they can never open during the shake
- Taking necessary precautions for lightening equipments to prevent them falling down on students and personnel
- Preventing glass explosion risk or moving the desks as far as possible
- Providing the stability of the hanging objects
- Providing steel desks
- Having a first aid closet in the classrooms
- Preparing a budget to apply the precautions mentioned above.

Informing all employees about these stages is very important. In hazard hunt those articles given above should be checked.

HAZARD HUNT

Possible risks in structures can be divided into two main headlines: Structural Risks and Non-structural Risks

Structural Risks

Risks related to structural components can be divided in two among themselves. First one is the risk that might occur when non-structural elements suffer damage. Collapsing and falling down of partition walls, plaster peeling, breaking of the glass are among them. Second one is the risk that might occur when bearing structural components suffer damage. When this kind of a risk occur the harm would be much greater even the extent of damage might result in the collapsing of the whole structure. When the earthquake security level of the bearing system components (column, girder, partition, foundation, floor) of a structure is higher the risk is lower. If security level is lower, the risk of loss of life and property is higher.

In our country most of the structural risks arise from the fact that standards and regulations are disregarded while constructing. Mitigation of the risks for new structures is possible only when the control mechanism works properly.

Structures require repairment and/or retrofitting because of several reasons. Primary ones can be listed as it follows:

- Alteration of valid regulations and putting new regulations into action which require higher performance from the structure.
- Alteration of the intended use of the structure (like converting a residence to a school).
- Harm occurrence in the structure related to earthquakes, time or environmental reasons.

Reason of the repairment is to bring a damaged structural element's performance to its former situation before the damage. Reinforcement includes responses to increase the performance of the damaged or non-damaged structural elements.

Reason of the repairment is to bring a damaged structu ral component's performance to its former situation before the damage. Retrofitting includes responses to increase the performance of the damaged or non-damaged structural components.

In order to prevent loss of life and property in probable earthquakes, retrofitting, repairment or reconstructing of

the buildings might be required. When deciding on these subjects together with the economical and technical criteria social, cultural and historical value of the structure should be taken into consideration as well. This is a kind of situation evaluation study in which the structure is examined in detail and a serious retrofitting project based on the results of this study.

Non-structural Risks

Non-structural risks arise from the nonstructural components of a building and furniture placement within it. Except column and girder systems of the building, everything (floor covering, headlining, glasses and all objects, furnitures, etc.) is included in the "Non-structural" components. In schools these components might pose great danger for the safety of students and personnel. Eliminating this kind of probable hazards prevents serious accidents and reduces physical injuries significantly.

If non-structural components are fastened to the wall, column or girder they might move together with the building. While fastening, using the proper material and equipment, locking and fastening the wheeled furniture, putting packing material if there is space between the fastened object and the wall are some of the remarkable issues.

In order to reduce the nonstructural risks in schools you need to pay attention to those:

- To fasten the heavy items like equipments, machines and furniture.
- To fasten the items which are hanging from the ceiling.
- To fasten electric appliances and to support them with uninterruptible power supply or generator.
- To keep all the poisonous, inflammable and hazardous materials in closed and safe boxes in which they cannot pour out during an earthquake according to the rule of " limit, isolate, eliminate, separate (LIES)" of all hazardous materials.
- To arrange training and awareness programmes for the staff and their families to increase their consciousness.

Fastening steps can be made with low costs. Different replacements of furniture in the house, fastening heavy and high furniture to the wall, not putting dangerous and heavy objects on top shelves are practical precautions.

In order to determine, reduce and prevent these kinds of hazards teams should be put into action. A group of parents who work as carpenters, construction engineers can participate in this work. Here, the biggest hazards which seriously threat the safety of life must be taken into consideration and the ones which can easily be eliminated must be focused on. This work should be extended over a period of time.

The necessary strategy to follow in Hazard Hunt can be summarized as it follows:

1- Assigning the responsible personnel to determine the non-structural hazards in each places

and in classrooms including school garden by preparing the similar ones of the Hazard Check Lists given in Appendix-8.

2- Note down each necessary study to reduce each confirmed hazard and eliminate it. Define the official person of this study and investigate its cost. Use recommended works for mitigation as a guideline.
3- Define priorities within a Mitigation Plan for reducing the hazards stated above. Make a timetable to complete all of them in order. Arrange your priorities as following: Fastening of objects that might cause critical threat, financial loss and the objects that make life easier.
4- Develop a system through which you can check potential nonstructural risks at certain intervals and maintain the continuity of hazard mitigation program.

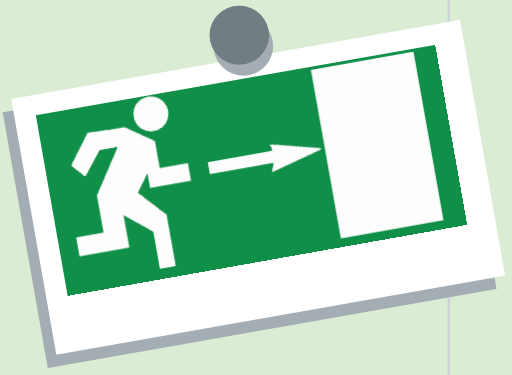
Necessary precautions to be taken against the most frequent hazards are those:

- Put the toys, paintings and other objects on the open and top shelves down to lower shelves. While doing this consider the heights of students.
- Put light safety on fluorescent lamps and fasten lamps to their place. Be sure that they are fastened safely.
- Attach book and the other closets to the wall. Secure portable shelves to prevent sliding. Put light objects on the shelves and closets, heavier ones to the lower shelves.
- Keep hanging plants and other oscillating objects away from windows, prevent their hitting to windows by fastening them (It should be thought that these objects would make a 45 degrees angle during an earthquake).
- Put quake-proof glasses in the windows or cover the windows with clear films to restrict the spreading of broken glasses.
- Change the glass objects in school (like the glass on the table) with non fragile objects.
- Fasten heavy moveable objects like a piano. Keep the wheels of this kind of furniture locked.
- Put computers or televisions on table or shelves. Fasten all screens and master processors to each other or on the tables with clips on belt or other materials.
- Put latches/handles to the drawers and doors of cupboards and fasten the shelves.
- In order to prevent chemical drop put band or seat belt to open shelves.
- Rearrange the objects like cabinets that would prevent movement or block the exit.
- If you have a fish bowl fasten it to the floor with big fastening clips, if it is on the table fasten it to the table and fasten the table to the floor.
- Fasten the other objects like map and board firmly to the wall. Use hooked screw for this.
- Secure ceiling decorations with a strong wire crosswise.
- Fasten the air conditioner with safety wire.
- Fasten the water boiler to the floor or to the wall.
- Train the personnel how to turn off gas, water, electricity installations.
- Keep emergency response equipments in accessible places.

Emergency Exit Signs

Besides layout plans, evacuation and fire brigade response plans can be prepared for schools as well. These points in floor and layout plans should be illustrated with special signs (Appendix-9):

- Fireman entrance which is lack in evacuation and fire brigade plans
- Water tanks
- Hydranths
- Emergency meeting/assembly points
- Pedestrian ways
- Places in which inflammable, explosive substances are stored or kept
- Places in which sprinkler systems exist
- Places where harmful gases can emerge



Fire Precautions

Fire exits, fire cabinets, exit signs and emergency lightening should be checked separately and the lacks should be completed. The summarized articles of "4390 numbered Regulation Against Fires" below should be applied:

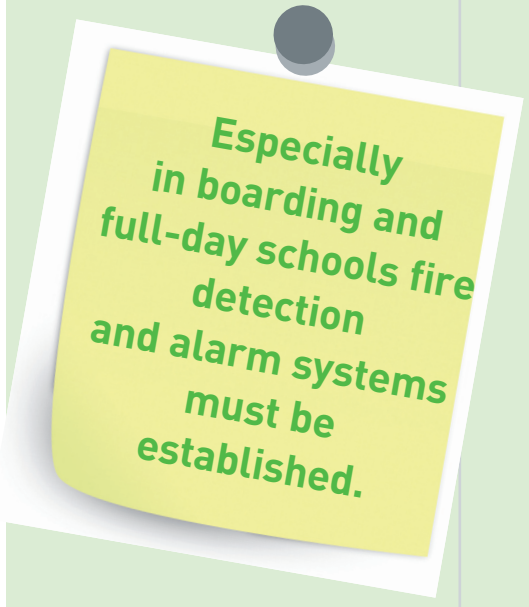
- Escape ways should be cleared from hazards and their safety should be provided and the plans showing these ways should be hanged on a glass case on the floors.

Escape ways and their exits are those:

- Exits from the classrooms and other independent places
- Corridors and similar passages at each floor
- Floor exits
- Ways which starts from beginning of stairs at the ground floor and goes to the last exit of the structure and last exit

These points should be kept in mind about exits:

- Elevators cannot be accepted as an escape way.
- If the number of the students exceeds 500 there must be minimum 3 exits.
- Apart from the main entrance and exit, keys of other exits should be kept in a glass case and a hammer should be kept to break the glass if it is required.
- Objects which might fall down and block the evacuation ways should be removed immediately or fastened if it is compulsory.



- Emergency direction and lightening system should be installed.

- Direction would not be less than 3 hours in case normal lighting is cut off. Direction signs should be prepared as white on green background according to TSE standards or similar equivalent standards and regulations. Maximum visible distance of a direction sign should be equal to at least 200 times of the sign height.
- Emergency lighting systems which are going to be established should have their own batteries, charge circuits, line voltage controllers, and independent lighting fittings which have lamp drive circuit.
- At each escape way there should be one fire warning button. Warning buttons should be arranged in a way that at this floor horizontal access distance of any warning button would not exceed 50 square meters and be installed at least 1.1 m higher and utmost 1.4 m from the ground.
- A central announcement system should be installed.

In the schools with hearing-impaired students there should be lightened warning devices. Especially in boarding schools smoke detection engines should be installed. Automatic detection system installation is compulsory in educational institutions which are higher than 21.5 m and total indoor area is bigger than 5000 m^2;

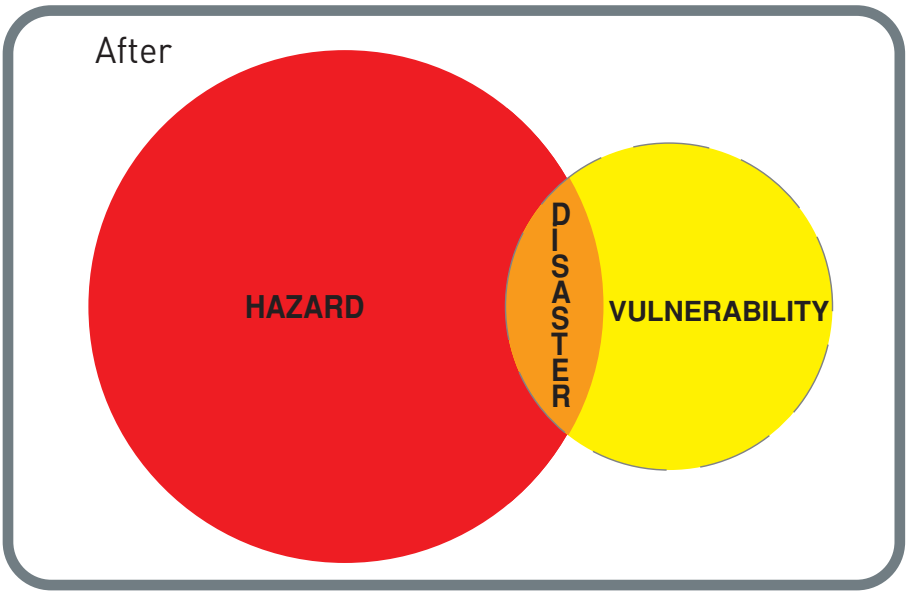
- Fire cabinets should be placed at corridor exit and near the pace, at each floor and each part which is divided with fire walls in an easily visible way and distance between them should not be more than 30 m.
- For each individual part at least one in number and one to add for 500 m^2 floor space, appropriate type 6 kg fire extinguisher tubes, also for boiler room two 12 kg chemical extinguisher should be kept. The distance between hanging ring and the ground would not exceed 90 cm and it should be installed to the wall.

- When buying devices and in the places where these devices would be stocked those should be kept:

In (A) class probable fire hazard places multi purpose chemical powder or fluid fire extinguishers
In (B) class probable fire hazard places dry chemical powder, carbon dioxide and foam fire extin guishers
In (C) class probable fire hazard places carbon dioxide extinguishers
In (D) class probable fire hazard places dry metal powdered extinguishers

In the places where fragile machines like UPS, computers, generators are kept and where there might be probable electrical fires "halocarbon" extinguishers should be provided.

- Once in a year, maintenance and inspection of electricity and natural gas installation should be carried out by an expert or relevant institutions.
- "FIRE INSTRUCTION" of the school should be prepared and hanged at the floors.



3 configurations of this instruction which will come into effect with the approval of institution chief should be arranged and one copy of them should be sent to local fire station and District Civil Defence Management.

- Each year enough allowance should be put into budget.

At least necessary things to be done according to "4390 numbered Regulation against fires" summarized above should be checked in Hazard Hunt as well.

MITIGATION PLAN

Mitigation, in long term, includes each precaution which aims to prevent and mitigate probable damages by disasters on people and property. Hazard mitigation planning is based on the planning approaches that aim at avoiding from risk, reducing the risk or eliminating it completely.

Planning process includes these steps:

- Hazard analysis
- Risk analysis
- Hazard Hunt
- Emergency Exit Signs
- Fire Precautions

The hazards mentioned within these steps should be listed in Appendix-10 and necessary precautions and urgency degree of them should be determined. A working plan and budget should be prepared according to priority degree.

VI. COMMAND AND SERVICES

Incident Command System (ICS) is the fundamental principle of emergency response method in institutions, corporations, districts, cities and across the country. The process of the system is based on the field emergency management which is developed for all hazards and emergency responses at each level. So, an active combination of communication, personnel, equipments, procedures and opportunities is made within a standardized organizational structure.

In our schools, Incident Command System would enable systematical communication, coordination and response.

ICS includes 5 functional broadening parts:

- Incident command system officers and command staff
- Response/operations
- Information and planning
- Logistics and maintenance
- Finance and management

Questionnaire

PERSONNEL INFORMATION

In order to organize ICS ideally, at first personnel should be known. The task of school manager is to update personnel information all the time. For this reason, registration of changes within the plan should be recorded as a chart. Plan should be put into a folder and its pages can be changed with new ones if necessary.

Personnel information forms are not only necessary for contacting with the person's family in an emergency but also necessary for the medical team who might apply medical response to the personnel. Besides in emergencies information of the hospital which the personnel and students are sent and information of the medical personnel to whom personnel is delivered should be gathered.

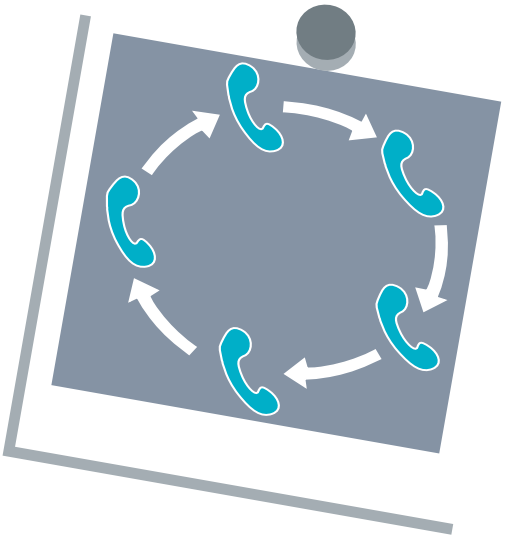
According to disaster regulation which of the emergency services and how many teams would be organized are definite. For instance if the personnel number is under 200 in a school there would be less need of emergency service to meet basic needs.

According to their assignments, hang the names of authorized people on a visible place who prepare predisaster and Disaster Emergency Aid Plan, organize exercises, coordinate similar works and respond to the emergency incidents and put their names in the plan. You should make assignments according to really necessary and accessible staff.

In order to establish emergency aid organization in incident command system, which is recom-

mended for the institutions with enough personnel, personal information and abilities of the staff should be known. That's why making a questionnaire is necessary.

TELEPHONE CHAINS



In a disaster each official and volunteer is supposed to come directly to the assigned position without waiting for a call and do their parts. Failing of telephone system causes a need for an emergency communication system in a disaster. In schools which have sufficient budget a radio system, in other circumstances alternative communication methods like walking courier can be applied.

Off-hours informing methods are those:
- To call directly to the telephone central office
- To use mobile phone
- To send SMS
- To send e-mail
- To come to school individually by running

Regarding the possible faults in communication following instructions should be given to the staff:

In any disaster or emergency which affects your city, district, school or building/department/laboratory you work:

- As the news are received, emergency case manager would be informed immediately.
- In case emergency case manager cannot be reached one of the members of Disaster Committee can start the plan.
- If the emergency case manager sees it necessary he/she wants to activate the telephone chain.
- If the emergency case manager sees it necessary disaster/incident command system of the department is established.
- Emergency services and all departments are activated according to the plan.
- Vehicle and human traffic in the department is kept under control by the security teams.
- Special departments are established for media, personnel and relatives of students.
- An appropriate communication network is built up.
- A constant coordination with local disaster management centre is provided and a communication officer is assigned for this work.

Since the communication engines become unusable in a disaster, all members of emergency teams and volunteers that hear disaster news, without waiting for any invitation, call, and telephone should come to the meeting places which are determined beforehand. In case they cannot reach these places they should meet at alternative meeting places which are determined beforehand. Soon after meeting, they should make situation evaluation and prepare an action and operation plan. The emergency situation members and volunteers should go to the meeting place in a way that they can depart at any time.

In a big earthquake or another disaster families and relatives of the personnel can form a communication chain to get information about the personnel. Communication chains should be prepared separately both for the staff and the parents of the students. After the disaster, if family and relatives of the staff are informed about the communication chain method, telephones and personnel of the school would not be kept busy.

In emergencies people who have exact information of their relatives should inform the others via a communication chain. After the disaster in order to contact with only the person or people on the list or schema, relevant people should be informed beforehand. Copies of these lists can be kept in the personnel's house, office and car or in any other appropriate place.

As it could be seen in Figure 2 contact officer of the school, the personnel assigned beforehand or the person who sees the incident starts the communication chains at first. Department personnel give the news by calling the first member and the first member without losing any time calls the other member. The responsible person of each department is responsible for the continuous work of chain within his group and he should be sure that each member is informed. The last member of each group calls or sends an SMS to his/her own department manager when he/she gets the news he/she repeats and confirms it. Department managers inform the school chain manager that their departments are completed. School chain responsible is supposed to receive "all right!" message from all other people responsible for other departments.

In case of any trouble, to find the origin of disconnection in telephone chain is within the responsibility of the managers in each department. Each member who does not answer should be informed by sending SMS or calling from alternative numbers.

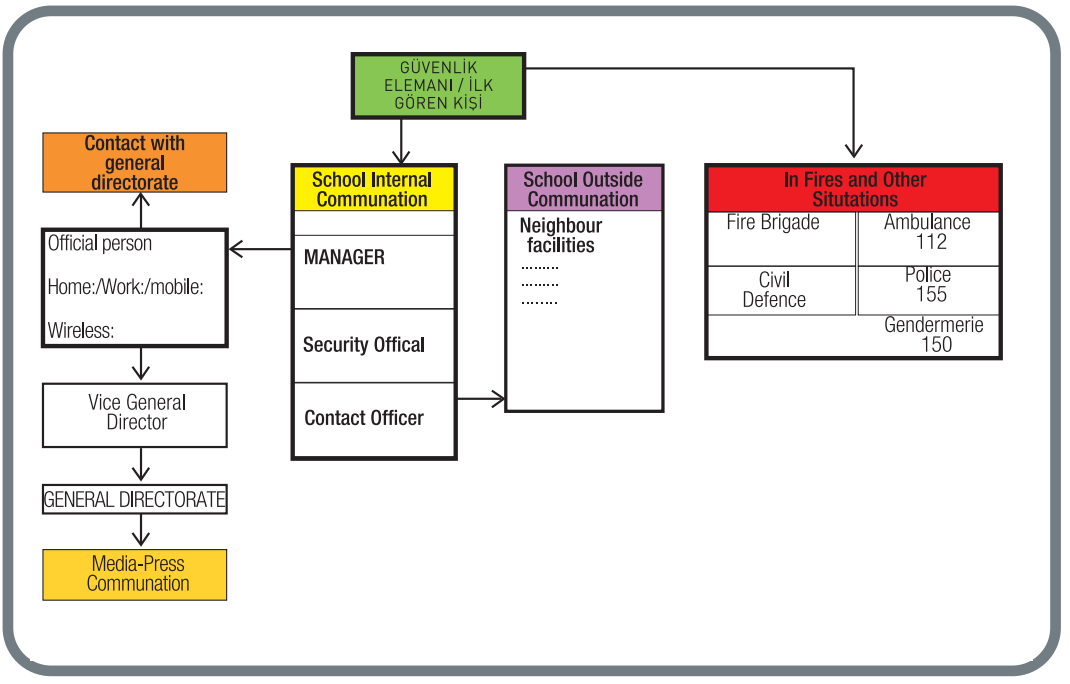


Figure 2. The telephone chain, internal and external surrounding communication opportunities in a school are described within the schemas and the lists for the purpose of using them in emergencies.

INCIDENT COMMAND SYSTEM

It would take some time for professional search and rescue teams to reach the schools. When considered from this point of view in an efficient disaster and emergency management using the same command system, language and methods and also making an organizational structure with the participation of all stakeholders are significant (Figure 3).

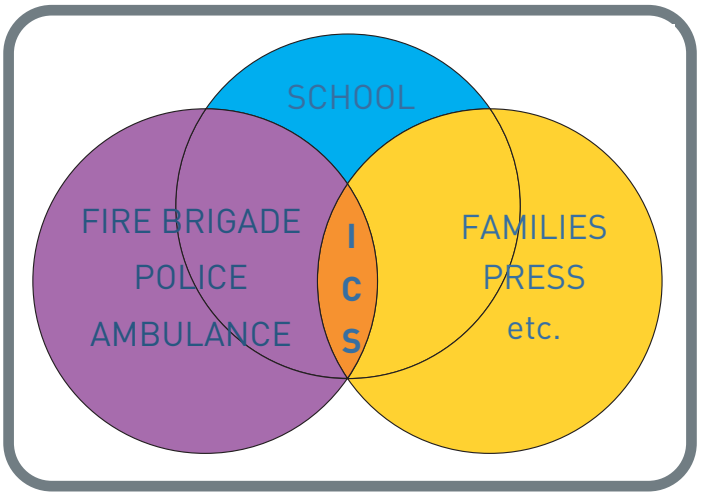


Figure 3. ICS is formed as a result of the interaction with the stakeholders like school, emergency case staff and parents.

Organizational structure should be in tune with the ordinary structure and have a part in the following plan. With this understanding you should review Disaster Emergency Aid Plans in your school and make them active.

ICS is configured with five broadening functional parts (Figure 4).

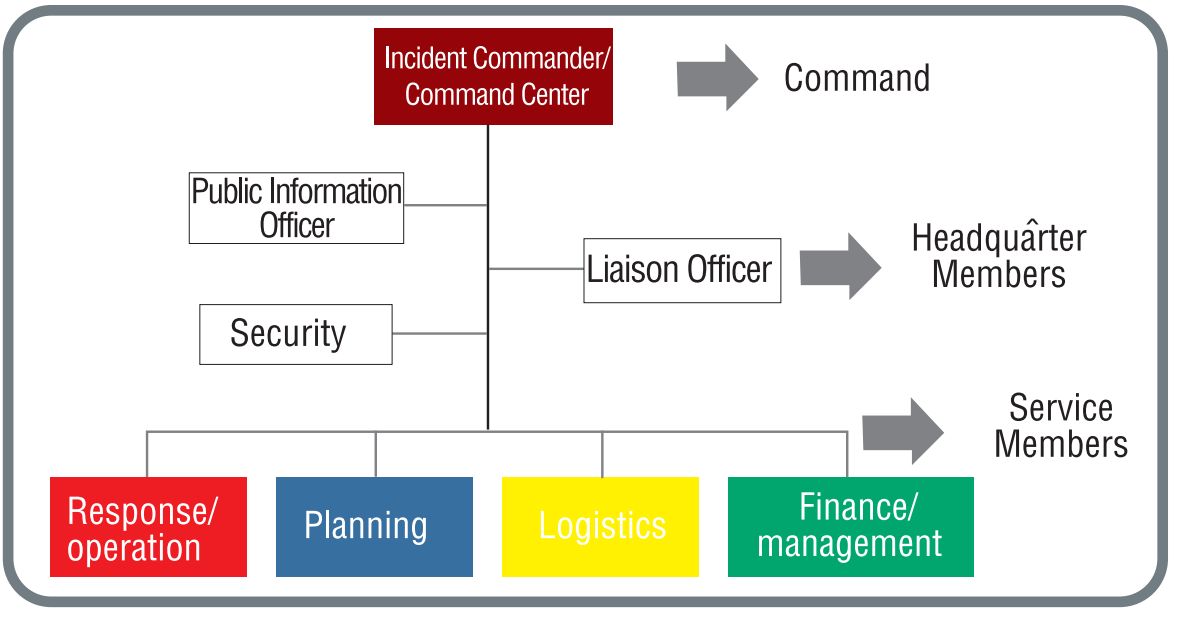


Figure 4. Basic necessary services to be found in Incident Command System.

Incident Command Centre

According to disaster regulation in each school, there should be a control centre for disaster preparedness, response and conduction of civil defence activities and actions. A command service should be established in this centre (Figure 5). This centre is in the most secure places or in the shelter of the institution.

Incident Command System officer or incident commander has leadership qualification, responsibility and authority of incident response management. His work in the disaster starts with his arriving to the incident place as the first person to respond the emergency. This responsibility can be given to the other staff by extending it according to complexity, length and intensity of the incident. Incident commander makes the classification of the incident and response with an interaction between emergency response services. Besides he activates necessary services for emergency response organization.

Incident commander undertakes all emergency response responsibility until other emergency staff get into action. If the incident gains speed additional positions and sources are provided. It should be considered that new personnel assigned to the tasks would affect the role of incident commander.

Incident commander immediately assigns the command staff who has the role and responsibilities given below:
Security: He/she provides the security of the command centre so that the operations work properly. Also he/she makes sure of whether the teams move safely or not.
Public Information Officer: He/she stays in touch with media and delivers the necessary information to press and public opinion.
Liaison Officer: He/she is responsible for the relations with other establishments and institutions.

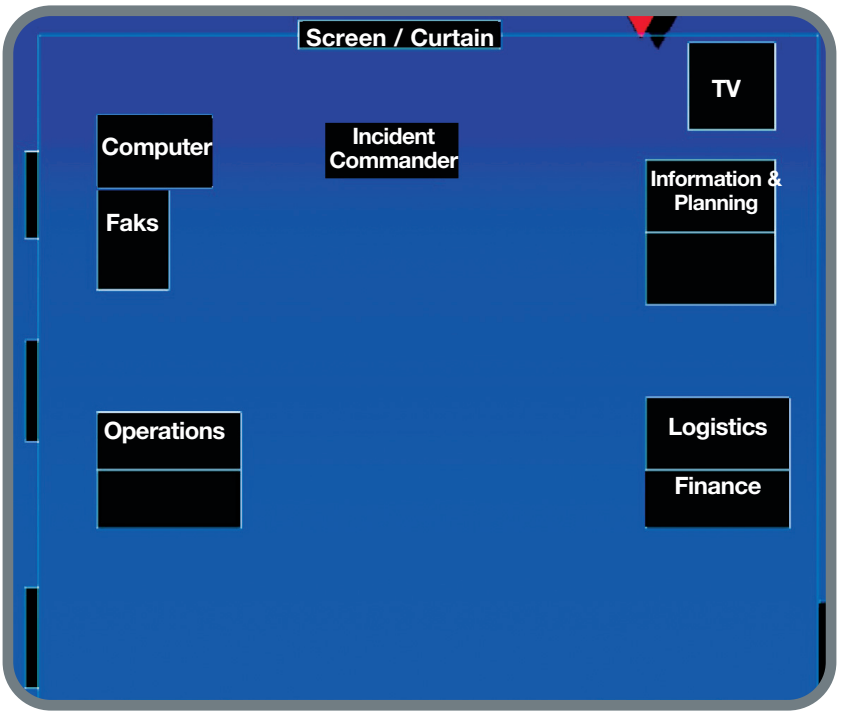


Figure 5. An example of existing office arrangement for a command centre.

Main duties of the command centre are those:

- To get and spread warning alarm news (This subject should be assessed in "Warning Alarm Instruction and On Duty Officer Instruction" in detail).
- To provide communication and conduction between emergency services (This subject should be assessed in "Emergency Communication Instruction" in detail. This instruction should include obligatory institutions to get in contact with, telephone chain between the personnel, communication with student families, safety, usage and maintenance of communication equipments).
- To provide contact, cooperation and collaboration with local civil defence, disaster management centres and management degrees if necessary.
- To provide communication, cooperation and collaboration with neighbour institutions when it is necessary.
- To assess the news related to CBRN hazards and to inform people around the school and civil defence management degrees about them.

Command centre should be far from existing and probable hazards and chaos of the incident. If it is possible it should see the incident scene. Also pay attention to those:

- Against disaster risk and hazards, the command centre can be established in a secure place and/or garden away from secondary hazards, as with tents or prefabricated buildings in a place far from the building if the building is safe.
- In this centre there are information cards, dress, telephone, blood group, illness if he/she has, phone numbers to be called in emergencies, delivery reports of students to their families, and for the students whose families have not come their delivery reports to security forces, enough stationery, office and essential materials.

Response Service

Operations service is responsible from all response activities. Operations can be divided into teams like fire, search and rescue, immediate medical response, sources management and hazardous substances response management.

The purpose of the response service commander is to prevent rise of loss and hazards by responding to disaster and emergency incidents. In operations, service commander gives support to the incident commander according to emergency and Disaster Emergency Plans. He directs all field operations and provides source for them.

Service commander primarily and respectively:

- Gets information about emergency case from the incident commander.
- Determines the necessary personnel for additional assignments.
- Appoints the necessary personnel for field operation assignments.
- Gives information constantly to the incident commander.
- Keeps records of all operations.

Information and Planning Service

Planning department collects information of disaster and emergency operations; analyzes this data and prepares extended incident activity plan.

This service is responsible from developing plan and procedures for the betterment of sources and opportunities of development department as well. Development planning is necessary for the continuity of education in schools. This department develops recommends on those topics as well:

- Establishment and restoration of basic fire fighting and other security systems
- Restoration of service systems
- Cleaning of wreckages
- Starting the procedures which will provide security

Rearrangement of working places can be asked from personnel and officials; Rearrangement of living places would be necessary; Reassignment of existing personnel and employing temporary staff would be required. Besides, a meeting can be hold for the purpose of assessing efficiency of response by gathering them all.

Logistics Service

Logistics department is responsible from providing source demands of operation department, buying equipment and materials, providing communication services, food and drink for response personnel, and necessary transportation that the incident requires.

This service is established together with a service commander and his assistant if necessary and enough personnel according to 4 people per 200 people calculation. These personnel can be organized according to size and feature of the facility so that they can do following services:

- Informatics
- Providing emergency food need
- Accommodation and dressing

Main duties of this service are those:

- To enlighten the personnel frequently during a hazard about the situation, to give support and spirits, to prevent demoralizer gossips.
- To provide temporarily nourishment, clothing, accommodation and communication needs of personnel, students and visitors.

- To collaborate with local social support service, to provide communication of students and personnel with their families.
- To provide necessary personnel for the institution after hazard.

Maintenance team provides primarily food and accommodation needs. After a great disaster and emergency food need which is enough for at least 72 hours should be provided. This department is responsible from transporting and establishing necessary equipment and material demands for the incident. It follows demanding procedures, determines appropriate place and time for the distribution of the names of the demanding institution and affected personnel, their demands, equipment and material and establishes a filing system. Commander of this department or transportation department if there is, provides school vehicles and fuel/diesel oil needs in emergencies as well.

Finance and Management Service

This department is responsible from determining short and long term financial influences that the disasters cause, making necessary payments to companies for equipment and material usage and keeping records of future payments. Basic duties are those:

Compensation/ownership of right: Includes general management of directing all compensations to the experts of accident and ownership of right**.**
Expenses: Includes gathering all cost information, checking, effective analysis of operation cost, offering all costs and making recommends which reduce costs.
Personnel Working Time: Includes keeping record of personnel working time and provides appropriate personnel working times which fit in the rules.
Procurement: Includes management of all financial matters related to contracts with companies and keeping records of equipment times. Drawing up contracts with companies arranged beforehand by agreement would be appropriate.

EMERGENCY TEAMS

According to the number of staff different services are established in schools. For instance, these services might be necessary in a school:

- Command Centre and headquarter
- Security and evacuation
- Fire
- Search and Rescue
- First aid
- Social aid
- Technical maintenance

In schools which apply bilateral education the personnel are selected separately for each shift group, assignment and responsibilities are announced. Students who are older than 15 can be assigned in these services.

According to provisions of "Regulation for the Protection of Buildings against Fire", fire team is equal to first aid service among the teams which are needed to be constituted. Because schools are considered as sensitive institutions they cannot be assessed within "Organisation Model to be made by the Public"; for this reason they must have Civil Defence Plan.

Each person should have responsibilities related to his/her job; responsibilities of teaching staff, providing the classroom and student control, classroom exercises and evacuation management are some of them. Managers would be responsible from school-wide decisions like evacuation necessity, the need of closing the campus, and deliverance of plan to the parents.

In addition to this, except assignment of definite people in emergencies, responsibilities like search and rescue, region safety would acquire currency. Hence, some staff can detach themselves from their duties in their classrooms and offices in order to discharge personal emergency responsibilities.

In daily life duties which are not included within the area of responsibility of school employees like first aid, fire extinguishing, they are obligatory duties in disaster and emergency times according to Disaster Emergency Aid Plan and training. Employees should leave their actual jobs in order to assign in these teams.

Structure and assignments of emergency response teams which are necessary to be established in disaster and emergencies in schools are like following in brief:

First Aid Team: It is established with the calculation of a team per 200 people. A crew consists of 7 people together with crew leader; a team consists of 3-6 crews together with team leader. People who have first aid training should be chosen primarily.

Basic assignments of this team are:

- To apply first aid to the wounded and sick people.
- To identify the dead people.
- To deliver dead people to relatives or Cemeteries Management with official report.
- To detect belongings of dead people together with social aid service, to deliver them to security forces.
- To be careful about that first aid equipments are not out of date and restock them all the time.
- To make a list of renewed emergency (medical sources of the region) and health (for each employee and student) cards.
- To provide current training of the staff who will apply first aid.

Search and Rescue Teams: Established with the calculation of a team per 200 people. A crew consists of 8 people together with the crew leader; a team consists of 3-6 teams together with a team leader. Teams consist of two or three people. Schools which cannot establish search and rescue teams can establish at least a support team to assist a professional search and rescue team.

Main duties of this team are those:

- To ensure that necessary equipments (lever, control wheel, safety helmet, etc.) exist in school.
- To ensure that team members get current training.
- To save trapped ones under debris.
- To apply first aid to the wounded ones during the rescuing process.
- To mend simple damages in buildings, to ensure the supporting or demolishing of the dangerous ones.

Safety and Evacuation Teams: It is established with the calculation of 4 people per 200 people. It consists of at least a leader and two people. A part of the team provides area and building safety and the other part provides evacuation.

Main duties of this team are those:

- To establish the meeting place in a place which is secure from primary and secondary hazards of the expected risk in the building or garden and to announce it to the staff.
- To provide an evacuation plan and inform parents and employees about this plan.
- To provide the safety of the school in and out.
- To detect suspicious people and inform the police.
- To check precautions in protective security regulation and to report the incomplete ones.
- To make daily ordinary controls inside and outside of the building.
- To arrange actions of the staff according to instructions and requests during a hazard and to guide them.
- To prevent panic, chaos and demoralizing actions.
- To control traffic.
- To prevent plunder and to keep rescued materials in a safe place.
- To prevent parents and other people entering into school garden after an earthquake.
- To determine the places which are contaminated by CBRN substances, unexploded bombs or bullets and to prevent students getting close to them.

To check hiding and black out precautions.

Fire/Fire Brigade Crew: It is established with the calculation of a team for 200 people. A crew consists of 8-10 people together with the crew leader and his assistant team consists of 2-4 crews together with the team leader. For instance in a school which has 1000 people together with students above 15 and the staff, 5 fire crews should be established and in these crews maximum 50, minimum 40 people would be assigned. Selected fire crew staff should get training from fire station or similar departments about this subject. You must be sure whether the fire engines work properly and the crew has necessary training.

Main duties of this crew are those:

- To keep streets where there might be a fire break out and to report the factors- if there is any- that might cause a fire.
- To check response equipments or systems like fire cabinets, extinguisher tubes, water tank, hydranths and warning buttons; to report the detections-if there is any- about maintenance,

fault, filling to the management.
- To determine emergency exit routes and the barriers on these ways if there are any; to check emergency lighting systems, warning and guiding signs.
- To keep fires under control in the school and to extinguish them.
- To apply simple decontamination in CBRN pollution.
- To help life rescuing activities and debris removal.

Social Aid Service: It is established with the calculation of a team per 200 people. A crew consists of at least 4 people together with the crew leader. Some crews that form this team deal with maintenance and accommodation. The other crews deal with the granting the applications to deliver students and satisfy demands.

Main duties of this team are those:

- To provide temporary nourishment, clothing and communication services.
- To evaluate applications of parents to take students and to deliver appropriate ones with an official report.
- To deliver students whose parents have not come to the security forces with an official report for sending them to the dormitories of the Social Service and Child Protection Institution.
- To help medical service for identification of dead ones, deliverance of them to relatives or authorized institutions, determining of their personal belongings; to keep their records.

Infrastructure Team (Technical Maintenance): It is established with the calculation of a team per 200 people. A team consists of 4-6 people together with the team leader. It consists of electricity, communication, natural gas, water and canalisation groups. It would be a necessary team to deactivate dangerous systems like electricity, water, natural gas or activate them by mending.

Main duties of this team are those:

- To make simple maintenance and repairment of electricity, natural gas, communication, water and canalisation systems.
- To eliminate hazards which would arise from them, to make necessary isolations, to provide safety by preventing students and staff getting close to them.
- To cooperate with related institutions in order to eliminate hazards arise from defects which are not within their knowledge and abilities, to provide invitation of these institutions or reporting damages to the District Crisis Centre.

Other Teams: In order to provide security of the school after emergencies and disasters and to perform various other services there would be a need for backup teams. Besides assistant teams should be established in order to support teams that are mentioned above.

The subjects given above should be arranged in “Civil Defence Plan”, “Defence Plan against Sabotage”, and in the sections of “Warning-Alarm Instruction”, “Hiding and Black out Instruction”, “Shelter Instruction”, “Evacuation Instruction” and “Civil Defence Services Terms of Reference” in these plans in detail.

We can show the hierarchy between the command, services, crews and teams schematically in Incident Command System. In Figure 6 a simple example of ICS is given which consists of a command centre, four main services and two crews.

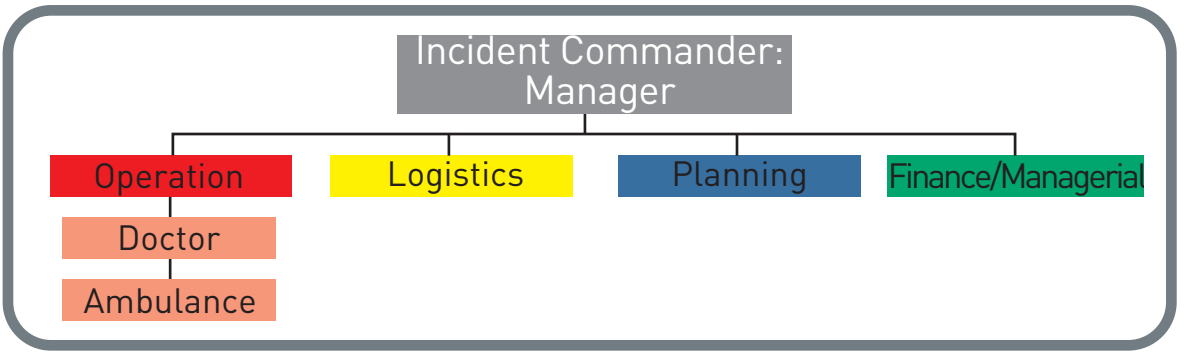


Figure 6. An ICS which is established and activated for a medical problem.

In our country, police, fire and medical teams respond to a big fire together. In Figure 7 an example of united ICS organization is given activated for an incident in the school which concerns both police and fire department. In this kind of a situation incident commander should be assigned as three people. In these situations nobody should say "Do not involve in, I'll fix it" and command should be shared.

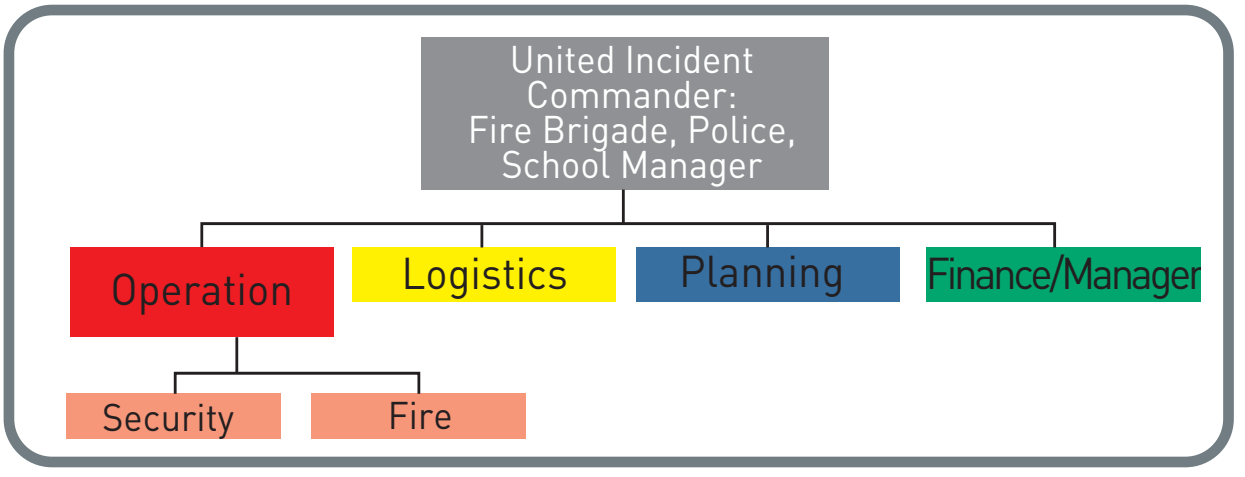


Figure 7. An example of united ICS organization activated for an incident in the school which concerns both police and fire department.

In ICS managers, teams which form crews under the services should be selected by appropriate people among the staff (as explained above). Operational crews like rescue, first aid, fire, technical maintenance (infrastructure), social aid and security which are recommended above should also be assisted by the crews of planning, logistics and finance/administrative services.

The responsibilities and the tasks of the teams are partially defined in the following part. These

definitions should be added to the Disaster Emergency Aid Plan as the things to do before, during and after a disaster.

As it could be seen in Figure 6 and 7 in some of the incidents and emergencies all teams are required to be established and activated. But in big incidents like disasters together with all operational services that are mentioned in laws and regulations, assistant services and teams are required to be established and activated.

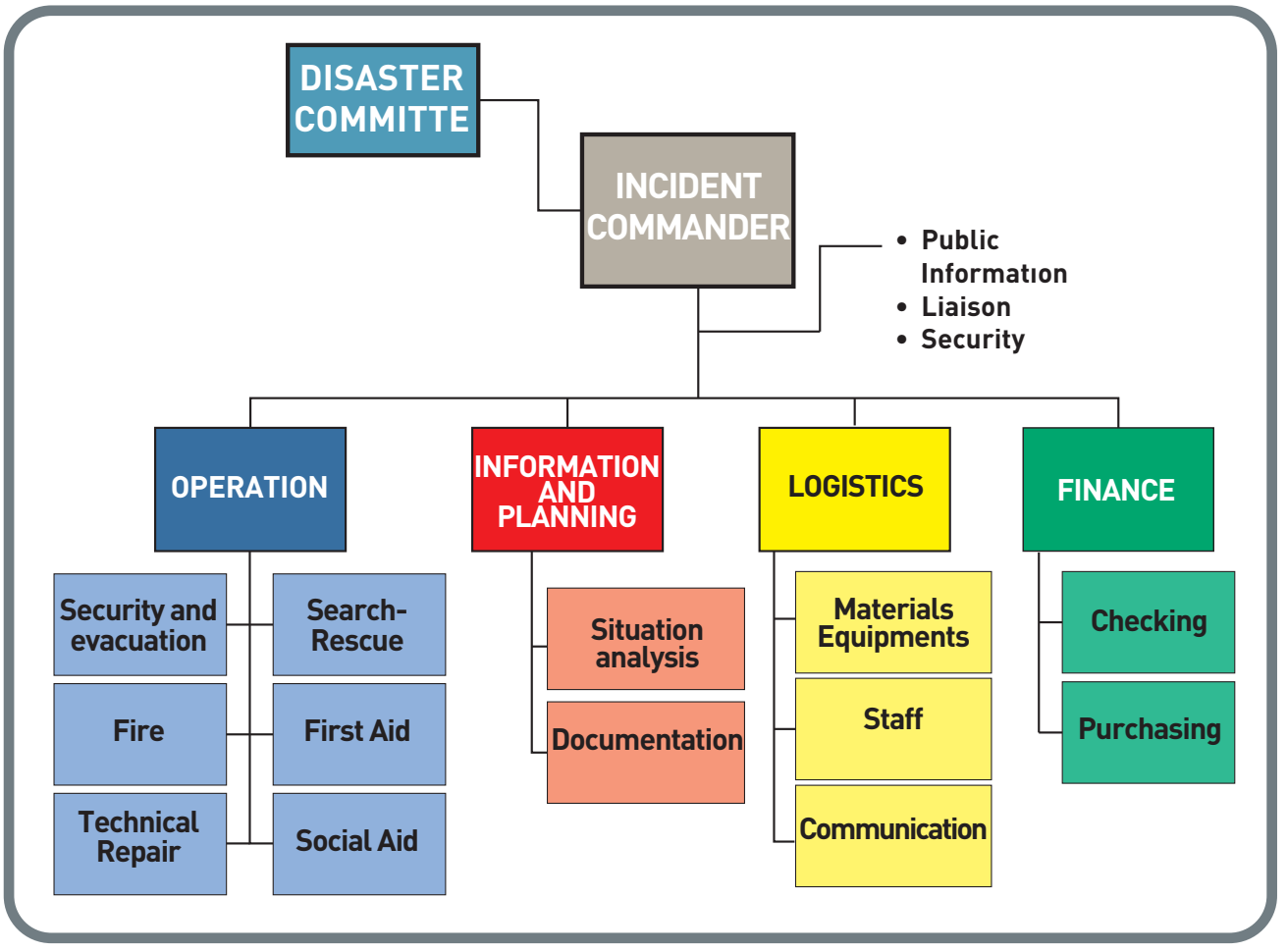


Figure 8. An extended ICS organization which is recommended to be established and activated in big schools.

In a school where number of the staff is more than 200, establishing and applying incident command system that is given below is recommended in a disaster (Figure 8).

School Disaster Response Teams are organized groups which consist of school staff. These teams should consist of people who have those qualifications:

- Informed about disaster risks and possible precautions to be taken against these risks.
- Have high disaster sensitivity and consciousness.

- Have strengthened opportunity and ability to respond during the first hours till professional teams come and equipped with necessary training and equipments

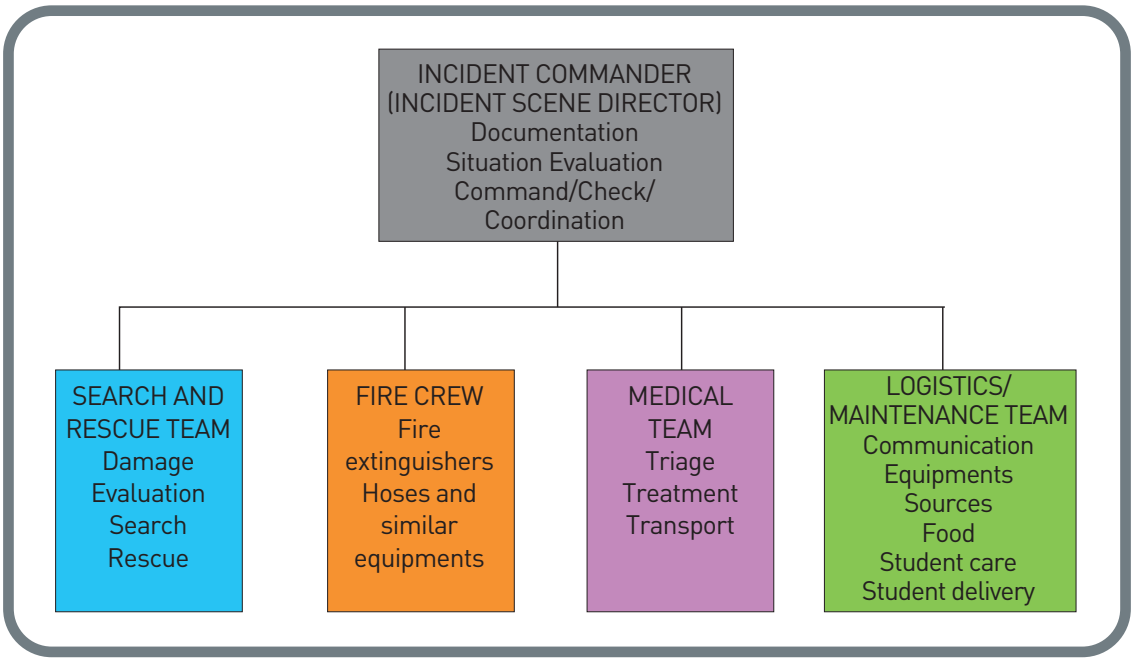


Figure 9. ICS organization for schools which have few personnel

This ICS organization can do beginning works in disasters with the trainings that are given before the disaster. In order to cope with these difficulties preparedness of people beforehand, making plans, collaborating with family members, neighbours and fellow workers is very significant.

Basic works that are stated above can be listed as these:

- Responding to small fires.
- Cutting of infrastructure services like gas, electricity.
- Responding to simple injuries which create vital threat and curing them.
- Doing light search and rescue works.
- Helping disaster victims to make them calm down.

COORDINATION

In In the school how and whom to ask for help from outside when necessary and with whom a disaster can be responded coordinately should be determined for any command centre which takes action in a disaster. In a school, security departments of activated command centre can ask for help directly from fire station or contracted departments nearby; also they are in contact with contracted departments, corporations, security departments, fire department and School Disaster Committee (Figure 8). The activity coordination which is out of department, if necessary, can be given to Command Centre in the structures like campus or general directorate-if there is any- in disasters.

VII. PROCEDURES

Application regulations and procedures are designed beforehand and put in Disaster Emergency Aid Plan for the purpose of applying in any emergency. Each school should develop its own Standard Operating Procedures and check lists which are determined as a result of hazard and risk analysis and put them in the plan for the significant hazards.

Application regulations are detailed documents which are developed by each institution to accomplish assignments in Disaster Emergency Aid Plans; they provide vehicles to practise strategic plans of management area and help relevant people to undertake their responsibilities for practising Disaster Emergency Aid Plans. They can be used for the purpose of training as well.

Application regulations and procedures include those:

- Standard operating procedures
- Working regulations
- Check lists
- Registration forms
- Information cards
- Maps
- Other

Regulations should have these qualities:

- Appropriate for the requested usage
- Complete and without defect
- Apprehensible, brief, easy to use
- Has enough details
- Updated
- Fit for purpose
- Described in Disaster Emergency Aid Plan

These regulations resemble fire instructions on the walls but their primary difference is the fact that they are prepared by the users. If this is not possible potential users should be trained with application regulations. A copy of application regulations should also be added to Disaster Emergency Aid Plan.

The other forms that application regulations include are those:

Registration Forms: Forms in which calculations, observations and other information are registered (for instance damage evaluation form).

Related Forms: Multifunctional forms (for instance checking lists which have registration parts).

Maps: Maps are an important part of Disaster Emergency Aid Plans. Multiple maps can be added to use in different parts of the plan. These can be listed as following:

- Geographical features and borders
- Areas of responsibility
- Places of important functions
- Transportation routes

When application regulations are prepared intended use and target group should be taken into consideration. Regulations should include all assignments and steps and necessary information for each assignment (who, what, where, when, how, in which standard).

Apart from them, application regulations should have following qualities:

Clear, brief and easy to use

- Should be written in a clear and modern language and be purified from unnecessary, complex and complicated technical terms.
- Each assignment should be organized according to logical order as they are practised in reality.
- Important information should be underlined.
- Should include regulations.
- Purpose, object and practicality of the document should be expressed.

Detailed Enough

- Standard operating procedures should be detailed in a way that they would be practised as the same in each application.
- Maps and charts should be detailed according to purpose.
- Information cards should include all necessary information.
- Check lists and other forms should include the quality and the purpose of the subject.

Updated

- The last updating time should be expressed on the document.
- The necessary time for updating the variable information should be expressed.
- Variable information should be updated according to a certain order.
- Maps and charts should be updated in a way that they reflect changes in the responsibility area.

To sum up, each important assignment should be included, purpose should be coherent and it should be recorded among documents and referred or given place according to the Disaster Emergency Aid Plan.

REGULATIONS

For efficient application regulations those are needed to be considered:

- Developing task lists

- Defining who will perform what, where, when and how
- Determining the person who will do the work
- Determining the person who will do the documenting
- Determining with whom a coordination would be provided
- Determining the steps for each assignment
- Clarifying standards for completing a task
- Checking the process

"Fire Instructions" is given as an example for regulations related to Disaster Emergency Aid Plans. These kind of documents should be given in "appendix" part of the plan.

INFORMATION CARDS

Information cards give necessary information of a work in a more appropriate format (sometimes as graphic). Examples include the followings:

- Reference lists
- Diagrams, labelled projections, graphics and tables
- Information summaries which are prepared in a matrix form (like tables)

Information cards are useful for those:

- In the tasks where the information given in graphics is useful
- Information that change periodically
- Data which is collected from different sources

This information is more useful when it is given on information cards:

- List of people who will be called/on duty in an emergency
- Contact list
- Available source list
- Organization schemas
- Task matrixes
- Equipment diagrams
- Other similar information

As an example to the information cards International Chemical Substance Safety Cards are shown in Appendix-11. The similar cards which are useful for the schools should be given in the "Appendix" parts.

CONTROL LISTS

A check list is arranged by ticking up when the steps, contents and other details of the task list is completed. Lists can be in following forms:

- A single box (DONE or EXIST)or an empty box (NOT DONE or ABSENT) to be marked.
- More than one boxes (for example YES or NO).

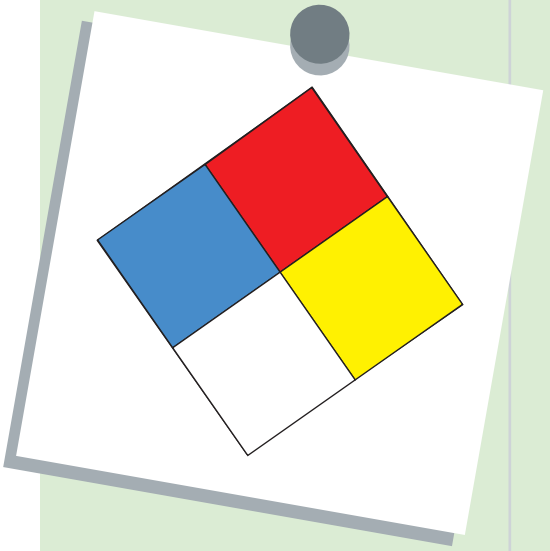
Check lists are useful in those works:

- In the tasks which consist of simple steps.
- In the tasks when recording of completed steps is necessary.
- When reminding is necessary for the works which require more than one responsibility.

Check lists are affectless in these conditions:

- When the observations must be recorded.
- When the calculation is needed.
- When the evaluation is needed (For instance; its degree or quality.).

Appendix-12, the checklist of an incident scene for a fire is given as an example.



STANDART OPERATION PROCEDURES

SOPs enable it to finish the responsibilities related to disaster management in a short time and they make sure the staff to follow the approved procedures in their works, they help the improvement of personnel training and fasten the emergency response.

Disaster management SOPs should be in a written format and easily available, they should be added to Disaster Emergency Aid Plans.

The structure and the use of SOPs might be summarized in this way:

- It explains the procedures which are necessary to per form some responsibilities step by step.
- It defines who is going to do what, when and how.
- It has a facilitating role in the complex tasks which require detailed explanations and application of certain standards.

In the process of developing of SOPs:

- Make a task list.
- Determine who is going to do what, when and how.
- Explain the steps of each task.
- Set the standards to perform the task.
- Test the procedures.
- Update the SOPs by controlling and renewing them all the time.

Pay attention to what the "Who?" question includes in SOPs:

- Who is going to do the activity?
- Who is going to be given a report?
- Who is going to coordinate with whom?

Working regulation is a written procedure which is designed to be used while performing a task. The working regulations might be appropriate for some situations however they would not be similar in other cases.

The elements of a good working instruction are these:

- Task title
- The aim of the task
- The date of the task
- Necessary equipments
- Act (how the each step is going to be practised)
- Expected results
- Standards
- Work control

In Appendix-13 an example of a SOP which shows how the staff should act and what he/she should be careful about when there is a bomb calling is given. This is the information the police want to know and we are supposed to remember.

FORMS and RECORDS

There are forms and records which should be prepared with impact and needs analysis beforehand in order to gather information and give a report for several subjects. Some of them are as it follows:

- Personnel Emergency Information Form
- Bomb Notification Form
- News-Message Form
- Personnel Enquiry Form

- Student Delivery Record
- School Emergency Case Report
- Triage Record
- Accident Evaluation Report
- First-aid Report
- Press Release
- Report of lost and injured people

An example for the reports that need to be prepared is given in Appendix-14.

It would be impossible or very difficult to prepare new forms or copy the ready ones during a disaster or emergency. Therefore more than one copy of these forms and records should be added to the plan or kept in another place.

An agreement should be made about how to deliver the students to their families or their relatives decided by the families and the "Student Request and Delivery Record" should be prepared at the same time.

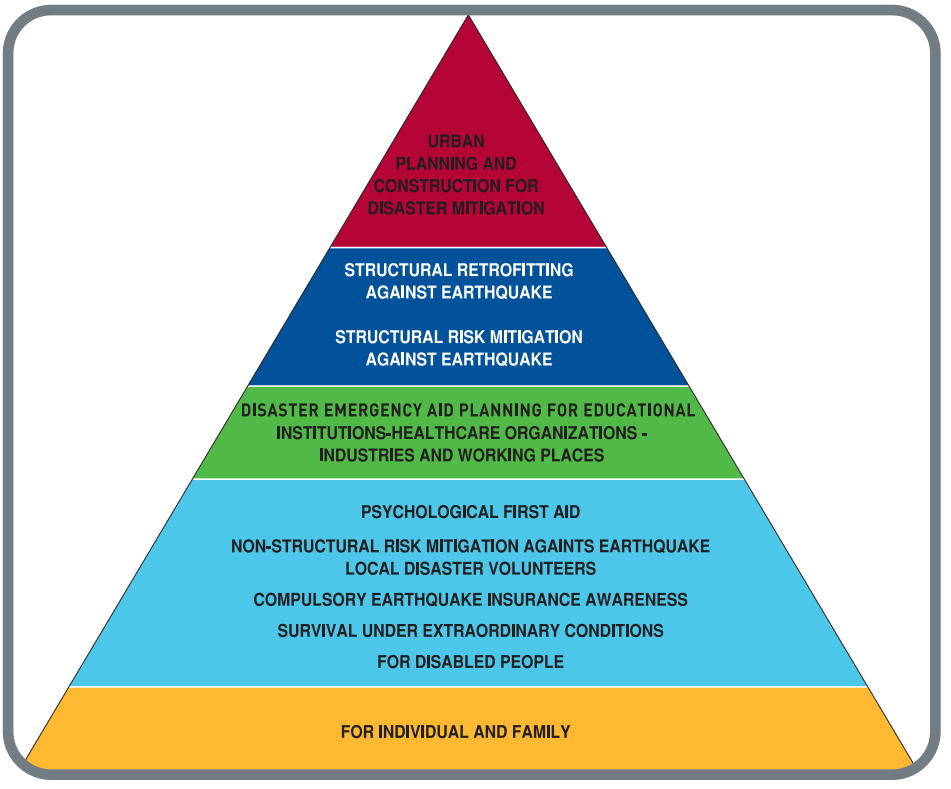
Especially students in primary schools are not going to be sent from the school until their families or relatives come. So the parents of the students who come from more distant places should be more carefully informed, these families must be told that there need to be a family acquainted who lives close to school and the number of the staff who would help the students after an earthquake should be enough in nursery schools and crèches. The parents should be informed in the beginning of the academic year.

These must be taken into consideration in the protection of important files, forms and records:

- The forms, which are going to be used during the process of emergency preparedness and after it, should be copied in sufficient number and kept in the emergency depots and the responsible people who are going to fill them should be decided.
- A safe archive area should be prepared to keep important files. (Year end marks and graduation information)
- Class list, the names of the families that the students are going to be delivered after a disaster, other alternative names, deliverance records, forms, emergency kit, a flash light and extra batteries, plastic glasses and so on should be placed in "Class Emergency Kit".

VIII. TRAININGS AND EXERCISES

Training, which is an important part of the planning process, enables the personnel to adopt themselves to their responsibilities; in addition to this they are important in terms of informing the ones who are not in the school during the planning process.



People generally get into panic during a disaster or emergency. This panic might cause the increase of damage and loss. The most effective way to prevent this situation for the management and the victims is to have the necessary information and training. Especially the ones who are going to response a fire should be practically trained. Subjects like disaster management, training of the emergency response teams and providing them with necessary equipments are only possible with pre-disaster preparedness. The pre-disaster trainings enable the people to get used to the emergency management cycle and they would be guiding to the behaviours of the people during a disaster.

The actions which are necessary to prevent the loss of life and property and to continue the education should be defined and the business continuity should be developed and kept alive by exercises. Annual education plans and exercise plans should be prepared within the framework of School Disaster Emergency Aid Plan.

The suggestions below not only include the basic training subjects that every department or personnel is supposed to understand but also mention the detailed training and information sources.

School Disaster Response Team should take these trainings to perform their jobs:

- Disaster Preparedness
- Fire Extinguishing

- Disaster first aid
- Light search and rescue
- Disaster psychology and team organization
- Exercise
- Gas leak response
- Evacuation
- Sabotage
- Chemical, Biological, Radiological, Nuclear (CBRN) attacks

These trainings which might need external supports should be updated in certain periods by taking into account the annual reviews and personnel change.

In developing a training program the subjects above can be used as a guideline. It is important to give the training in the process of defining responsibilities and after it by providing continuity.

REMIND THESE!

Plans ABSOLUTELY DO NOT WORK if they are unknown to the students, personnel and parents. They should be practised regularly in order to refresh the minds and to train the new staff and every time it should be clearly defined that who is the responsible one and who should decide. Undoubtedly, the preparedness of your team before a disaster would decide how much they would be capable of practising their tasks. In addition to this your team should do the necessary exercise and have the necessary training so they would practise their tasks immediately and in a safe way. These actions should be repeated constantly to become functional and achievable.

A guide is given here for the things to do by the staff and the teams at schools in case there is an earthquake risk:

SCHOOL MANAGER/ADMINISTRATOR/INCIDENT COMMANDER

Before an earthquake
- Ensure disaster and emergency awareness of your personnel.
- Ensure them to have exercise and management/organization trainings.
- Inform them about the non-structural risks.
- Develop a system about the deliverance of the students and determine how to include the families to this system.
- After a detrimental disaster be informed about what to do for an immediate damage evaluation in your district.
- Take inventory of your personnel's skills and qualifications (wireless operator, bilinguals, etc.) which might be useful in Disaster First aid Planning.
- Determine a place other than the school to keep the copies of available records by consulting the local management.

- Provide a place in order to have an incident command centre, a sketch of the school and the current student list.
- Develop a permission plan for your personnel by taking into account their families and responsibilities out of the school.

During an Earthquake
- Take your "Drop-Cover-Hold" position in an appropriate place as soon as you feel the shake.
- If you are outside take your "Drop-Cover-Hold on" position by keeping away from the buildings.

After an Earthquake
- Count all your personnel and students.
- Put into action your Disaster First aid Plan and coordinate it.
- Control the inner and outer communication (region, city centres, etc.).
- Make decisions about evacuation and other critical issues if required.
- Keep a record of events, decisions and actions.
- Appoint someone as a press agent.
- If you have the least suspicion of any possible structural damage in school building, contact with the responsible architects and construction engineers according to the regional plan.
- Arrange specific exit doors if the school building does not let evacuation in every sections. Non-structural damages do not always require evacuation (and remind this aftershocks after a big main shock may cause damage as well).
- In your contact with the authorities inform them about your evaluation of general situation (about the students who have to shelter in the school and how long they are going to stay, how the needs are going to be provided).

In case your school is chosen as a Red Crescent shelter in a disaster make necessary preparations in order to perform this service.

THE TEACHING STAFF

Before an Earthquake
- Keep the updated list of the class. Keep them in a safe and easily accessible place.
- Keep the class disaster kit in a safe and accessible place, for instance next to door.
- Take part in school disaster exercises and encourage your students.
- If the teachers have other responsibilities in an emergency response team then make sure that the control of the class teacher and the students is made by someone else.
- Educate the students about earthquakes and earthquake preparedness.

During an Earthquake
- Take your "Drop-Cover-Hold" position in an appropriate place as soon as you feel the shake.
- If you are outside take your "Drop-Cover-Hold on" position by keeping away from the buildings.

After an Earthquake
- If the evacuation directive is given make the students go out and take your emergency card with you.

- Know the process of first aid and other emergency aids for the students who might need help.
- Inform the lost students to the authorities.
- Soothe the nervous students.

SCHOOL PERSONNEL (INCLUDING SECURITY GUARDS AND DINING HALL STAFF)

Before an Earthquake
- Help the planning team in defining the non-structural hazards.
- Help to reduce the nonstructural hazards under the directives of planning team.
- Take inventory of food and drinks.

During an Earthquake
- Take your "Drop-Cover-Hold" position in an appropriate place as soon as you feel the shake.
- If you are outside take your "Drop-Cover-Hold on" position by keeping away from the buildings.

After an Earthquake
- Check the electric, water and gas wirings, determine which ones are working or not and do everything that is necessary to prevent a possible danger. Report the results.
- Take the note of structural and nonstructural damages while controlling the wirings. Report the defined damages.
- Lend assistance for evacuation.
- Take medical precautions for emergencies. Make sure that toilets and water would not be used until the pipes and the channels are controlled.
- Use emergency water reserves (including the water in thermo siphons).
- Make an inventory of the food in order to provide the needs of the students and the personnel and start planning for the distribution of the food.

FIRST AID TEAM

Before an Earthquake
- Provide the first aid kits in proper conditions without getting them expired all the time.
- Keep the emergency and health cards (the list of the institutions that might help) with you by paying attention to the currency of the information.
- Make sure that those who would apply first aid have the necessary training.

During an Earthquake
- Take your "Drop-Cover-Hold" position in an appropriate place as soon as you feel the shake.
- If you are outside take your "Drop-Cover-Hold on" position by keeping away from the buildings.

After an Earthquake
- Give a report to the command centre, manager.
- Apply first aid; take records of all the patients and treatments.
- Determine whether there is the need of a more sophisticated medical aid. Coordinate the calls for help with the manager.

SEARCH AND RESCUE TEAM

Before an Earthquake
- Take your "Drop-Cover-Hold" position in an appropriate place as soon as you feel the shake.
- If you are outside take your "Drop-Cover-Hold on" position by keeping away from the buildings.

During an Earthquake
- Take your "Drop-Cover-Hold" position in an appropriate place as soon as you feel the shake.
- If you are outside take your "Drop-Cover-Hold" position by keeping away from the buildings.

After an Earthquake
- Search each room in the building by making a visual, physical and voice control. Inform the first aid teams about the locations of injured people. Inform the manager in command centre about other problems.
- Check certain structural problems and important structural damages during the wreck removal process.

SECURITY AND EVACUATION TEAM

Before an Earthquake
- Develop an evacuation method with planning committee, school manager and local disaster management group and inform the families and personnel about this. Work on how to share the evacuation plan with the families who do not know Turkish.
- Keep the plans about the meeting places for an emergency.
- Make sure that the necessary materials are in an accessible place.
- Make sure that the evacuation route is clear.

During an Earthquake
- Take your "Drop-Cover-Hold" position in an appropriate place as soon as you feel the shake.
- If you are outside take your "Drop-Cover-Hold" position by keeping away from the buildings.

After an Earthquake

- Lock all the outer entrances and garden doors and provide the building safety.
- Assign a team member to contact with the families at the main gate. This person directs fire, police, ambulance and rescue teams if required. Inform the manager in the command centre about the activities.
- Make sure that the emergency meeting point is an accessible and safe place.
- Determine the needs in the process of evacuation.
- Take the list and report the condition of the group to the manager in command centre.

FIRE TEAM

Before an Earthquake

- Make sure that the fire extinguishers are working and the personnel have the necessary training for using them.

During an Earthquake

- Take your "Drop-Cover-Hold" position in an appropriate place as soon as you feel the shake.
- If you are outside take your "Drop-Cover-Hold on" position by keeping away from the buildings.

After an Earthquake

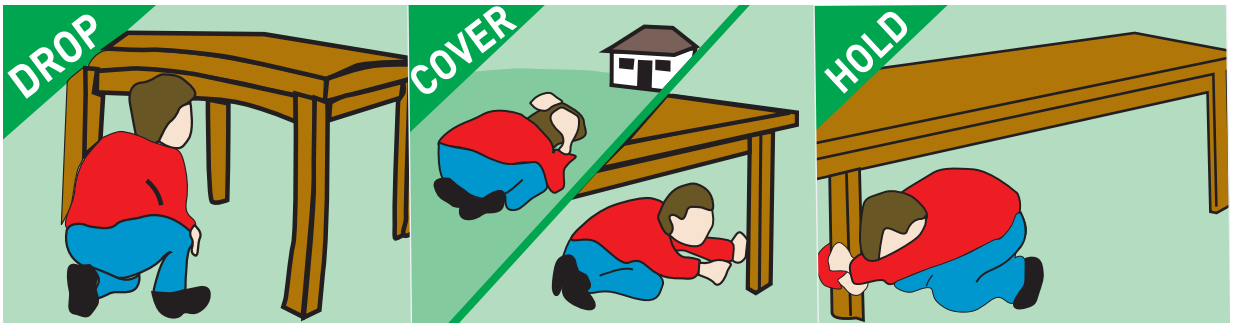
- Control whether there is a fire or not; inform the incident command centre and area safety about its location.
- If it is possible try to keep the fire under control.
- Save the students and personnel under risk.
- Provide the security of the area.

BASIC BEHAVIOURS

To know the appropriate ways of behaviour during and after a disaster is important in terms of reducing the unnecessary loss of life in a disaster. If you exercise these behaviours in school when there is a danger, you might do the right behaviours automatically during a disaster.

Some basic actions that should be done in general dangers are as it follows:

Hazard	Behaviour
Earthquake	Drop-Cover-Hold
Fire	Evacuation
Smoke alarm	Shelter in place
Air crash	Drop-Cover-Hold
Bomb or bomb threat	Drop-Cover-Hold and/or evacuation
Hazardous material spill	Shelter in place
Secret fire or armed attack	Lockdown
Severe storm	Shelter in place, Drop-Cover- Hold or evacuation



Drop-Cover-Hold

This exercise is applied in earthquakes, air crashes, bomb explosions and threats, thunderstorms and tornados. When the ground begins shaking, a loud explosion is heard/felt or a drop-cover-hold exercise is applied, everybody in school should start the protective activities.

Apart from the buildings where there is a complete destruction, mainly the non-structural risks cause the deaths and injuries in the buildings. In 1999 Marmara Earthquake there is the complete destruction of 3-5% of the buildings. The only exercise that is universally accepted in the protection from non-structural risks is "Drop-Cover-Hold".

Lockdown

This exercise is applied when a shot is heard or when there is a risk of a suspect and dangerous person or a gunman. For instance everybody should lie down on a flat surface or ground after a shot.

If you are indoors lock the door of the building and/or room inside. If you are outdoors, enter the building when it is safe and do shelter in place and lockdown procedures.

SHELTER IN PLACE

It is applied when there are hazardous material (Chemical, Biological, Radiological, Nuclear [CBRN]) attacks spills or fallouts, smoke, shots, sharpshooter danger or severe storms. When there happens a hazardous material risk in your surrounding stay in until you are told to go out and try to build up a safe shelter by blocking the air intake (from outside to your room).

A check list is given as an example below for the shelter in place exercise in schools.

Yes	No	Partially	Done (?)
_____	_____	_____	1. Parents were told beforehand about the exercise
_____	_____	_____	2. The scenario was controlled by the authorities.
_____	_____	_____	3. The personnel/students got in a very short time
_____	_____	_____	4. Those who could not get in went to other shelters
_____	_____	_____	5. All the doors and windows are tightly locked.
_____	_____	_____	6. "We are in the shelter" sign was hanged to the outside of the room.
_____	_____	_____	7. A roll call for the personnel and the students was made
_____	_____	_____	8. The air inlets around the out door were covered with wet towels etc
_____	_____	_____	9. Fans were covered and/or strapped.
_____	_____	_____	10. Air inlets around the windows and doors were covered with straps.
_____	_____	_____	11. If there are any air conditioners and aspirators they were turned off.
_____	_____	_____	12. The curtains and clothes on windows etc were closed
_____	_____	_____	13. Unnecessary lights were turned off but the electricity was not cut off.
_____	_____	_____	14. There was a room separated for those who came to school during the exercise
_____	_____	_____	15. The "Visitor Room" sign was hanged to an appropriate place.
_____	_____	_____	16. Alternative toilets were prepared in case there was not one available in each room.
_____	_____	_____	17. Alternative water sources were prepared for the room.
_____	_____	_____	18. Students' need for using medicine was determined beforehand during the "Shelter" exercise.
_____	_____	_____	19. If there were police/fire crew/ambulance services, Disaster Management Centre was informed about them.
_____	_____	_____	20. Doors and windows were not opened until the sign was given.
_____	_____	_____	21. The closed areas were aerated after the exercise.
_____	_____	_____	22. Nobody went out after the exercise.
_____	_____	_____	23. There was a good communication method during the exercise.

Please use the back of the form for your suggestions and comments and give it to the superintended in ..... days. This form should be filled by every personnel who participate in the exercise bodily or as an observer.

Name:_____Date_____Place_____

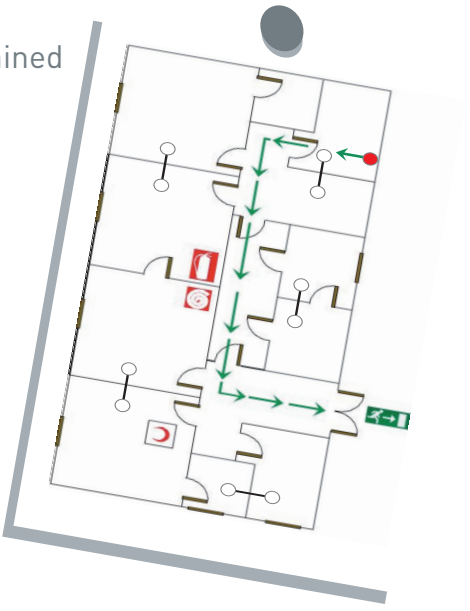
EVACUATION AND RAREFACTION

The risk of confronting with a hazard on the evacuation ways should be minimized before the evacuation.

Therefore possible dangers on the evacuation route should be controlled regularly with a control list and the possible hazards should be removed.

You should move towards the nearest exit in case there is a fire, plane crash or an explosion in the building. Therefore when you are planning the exit ways, take into account the disabled people as well.

- Use the evacuation ways regularly in the exercises.
- Include disabled/handicapped people in the exercises.
- Instruct the personnel about the subject that the predetermined evacuation roads might be blocked in an emergency.
- Work on alternative evacuation and exit ways.



Evacuation Procedures: Generally the evacuation order is given by the incident commander and the personnel is warned. Incident commander want the building to be evacuated when the building is not safe as a result of a fire, an explosion or hazardous material spill.

Evacuation reasons after an earthquake

- A fire outbreak or its possibility.
- The structural damages happened in the building.
- Chemical spills in the building.
- Gathering the whole personnel somewhere for the maintenance and in that way enabling them to be free to perform other tasks.

The reasons not to evacuate after an earthquake

- Hazardous material spill outside.
- Cold weather conditions.
- Defining the hazards in main and alternative evacuation areas.
- The dangers on the evacuation ways.
- The dangers related to electricity.

The reasons for delaying the evacuation

- Serious injuries.
- The limitation of the personnel's mobility.
- Blocking of the evacuation roads.
- Disabled people who need help.
- The fact that there is the need of time for evaluation.

When the evacuation process ends each personnel in the emergency meeting area should be counted and missing people should be reported. In case there are missing people you should not try to return and search but instead the security guide or rescue teams should be informed.

Other attendants perform these tasks for a probable evacuation after an earthquake:

- Make situation evaluation for the evacuation ways, determine the convenient evacuation route.
- They keep on making situation evaluation though there is no need for evacuation.
- Control whether there is any injury or not.
- Take first aid precautions for injured people if necessary.
- Wait for the panic situation and everyone to calm down.
- Repeat the same procedure above in every aftershock.
- Control the co-personnel or unit.
- Complete the evacuation process when the evacuation order comes from the incident commander.

Things to pay attention during the evacuation

- Attach priority to order and security during the evacuation process.
- CLOSE WITHOUT LOCKING the doors and the windows to reduce the air circulation.
- Try to help the victims without putting your life in danger or provide help for them.
- Leave the place without panic; do not forget to take (without putting your life in danger) important personal protective materials and items and if required your first aid kits with you as well.
- Go to the nearest exit in a calm and silent way, avoid from unnecessary hastiness.
- Avoid from unnecessary talks and pay attention to that the queue is proceeding regularly.
- Use the stairs in an organized way, do not cause panic.
- If there is smoke, duck and crawl towards to the nearest exit by following the closest wall.
- When you confront with closed doors control whether the door is hot or not by placing the back of your hand to the door. If the door is cold open it carefully and keep on proceeding if it is safe.
- Go to a predetermined meeting place after the evacuation.
- Do not allow anyone to return the evacuated departments without the permission of incident commander after the evacuation.

Evacuation exercises should be practised and announced regularly. Some evacuation exercises should be done without announcing beforehand. All the personnel and students should evacuate the building without submitting the disruptions in education and meetings as an excuse. All disabled students and personnel should be out of the building with the help of others.

Co-systems

While determining co-units for an ordered and safe evacuation in schools some certain points should be paid attention. You might develop the list below if different points are needed in the exercise in your school.

- Every year, for instance in the beginning of the school year, neighbour personnel/units/classes/rooms should be matched. Therefore define the units and/or personnel next or opposite to each other as “co” or “body”.

- Reconsider the evacuation roads.
- Co- units would control each other to define some certain subjects after the event and the control of the unit's condition. These are the subjects like the medical conditions of each other, the needs of injured people, and the need for staying with injured students or personnel. If possible injured people should not be left alone. Remember; officials are responsible for everyone but in case everybody's life is in danger the thing which is good for the majority should be done.
- If required a co-personnel evacuates two units together. Personnel should not leave their units without the leadership of the officials. An official should stay behind and close the door (without locking) when he/she is sure it is completely evacuated. If each co-personnel is capable of performing the evacuation process one of them can precede before the personnel and the other one can stay behind and go with the personnel to the meeting place.
- Co-units should make a line side by side so the personnel reports can be prepared when they arrive to the meeting place. Every personnel have to fill in the Personnel Enquiry/Report Form which is going to be given to the command centre.
- Each unit must have the personnel and students' lists of the co-unit together with their own personnel list in the emergency kit.
- After arriving the meeting place, one of the members of each co-unit should check in to make the control of the command centre easier after the personnel and student enquiry and the reporting process finished.
- In the emergencies which do not require an evacuation, it might be necessary for the co-per sonnel to take the whole personnel and the students in the unit to the other co-personnel's unit. Then one of the personnel might be free to perform other necessary tasks.
- It must be sure whether the personnel who is acting as representative in performing some tasks, knows who or which their co-personnel/class is or not.

Co-units will control each other during both the indoor and outdoor evacuations.

Floor and Position Plans

Several copies of the plans mentioned below which are going to be prepared according to the floor and position plans of the school and the forms mentioned before should be added to the plan.

Outdoor Response Plan: The meeting places of emergency teams and the safe areas where the personnel will be evacuated should be decided and illustrated on position plans. Make sure that the places and information mentioned below are included in the outdoor response plan which shows the streets and the roads around your school and developed for outdoor operations. And be careful about that these are kept away from potential hazards within a safe distance which is the half of the shortest building length:

- Emergency container or food and material storages.
- Command (emergency management) centre.
- Meeting places of services.
- First aid areas.
- Some meeting places or tenting areas outside the building for emergencies.

The meeting places of everyone will be marked in yellow both on the layout plans and on the land. And the areas where each class is going to deploy will be shown with a letter.

Indoor Response Plan: In this plan apart from basic areas in outdoor response plan the places needed for shelter-in-place, CBRN shelters and lock down procedures are going to be illustrated as well. This plan will be used for the emergencies as a result of an earthquake or other natural disasters and do not require an evacuation. So, prepare a third emergency response chart in the way that the parts below are going to be marked.

Put the chart which contains the information below to the plan:

- Provision and material stores
- Command centre
- Meeting area(s) in the building for some emergencies
- Material and stationary
- Water tanks
- Places where there are fire cabinets and extinguishers.
- Laboratory, workshop
- If indoors, sports hall, canteen, cafeteria
- Classes and class sizes
- Rooms and the personnel sizes in the room
- UPS rooms
- Transformer, boiler room, wall box and electric switchgear
- Gas valve
- Library
- Common room
- Computer room
- Emergency exists and routes etc.
- First aid areas
  - Triage
  - Urgent
  - Waiting
  - Morgue
  - Psychological support
  - Fire brigade and ambulance entrance

First aid Areas: There should be three places like Urgent, Waiting and Psychological. (It should be paid attention that the place is suitable for the entrance of emergency vehicles, but is not noticeable from the press and the personnel. Entrance of the first aid area might be used as a triage point. Those who go through a psychological trauma should be separated from the physically injured ones.)

- Morgue (It should be brick or an other non-permeable cold floor surface, safe and suitable for vehicle entrance , and it should not be noticeable from the press or personnel.)

- Traffic control and security point
- Media (press) centre
- Signs that show the way and the entrance of shelter in places for those who are late (For the shelter-in place procedure during chemical-biological and similar hazardous material spills people should gather in the places like toilets/hails which have the minimum connection with outside furthermore down floors as nuclear shelters and top floors for shelter-in place and/or lock down procedures in case of an arm attack from the outside should be chosen.).
- Classification point (the place where the sources are kept before using them)
- Information centres to reduce the stress of the personnel and their families about the event.

Outdoor Evacuation Plans: Evacuation and exit plans should be developed according to the scenario. In an emergency like a fire you will have to evacuate the place in a short time after a sign or an alarm. So you have to be prepared for this. In other words do not forget to sign the main and the alternative evacuation ways everyone in the building is going to use, emergency exits, fire exits and disaster supplies on the floor plans in order to evacuate the building in a safe way during an emergency. Put the chart that contains the information below to each corridor, room and class.

The information that should be in an evacuation plan –if there is one – is as it follows:

- Your location
- Emergency phones
- Fire alarms and warning buttons
- Fire smoke detectors
- Fire extinguishers and cabinets
- Fire doors
- Fire escape stairs
- Eyewash and safety showers
- Primary and secondary evacuation roads
- Exit ways for disabled people if there is any
- Materials and documents which are going to be saved first.
- Disaster bag, supplies, first aid kits
- Places of electric, gas and water valves or control panels
- Emergency lighting
- Emergency exit doors and windows
- Fixed and portable stairs
- Emergency meeting places outside
- Co-units and places

Search-Rescue Plans: The most important documents that the search-rescue teams might need after an earthquake are the architectural drawing plans. Search- rescue operations are going to be signed on these empty plans.

Apart from these plans fire response plans for schools would be prepared as well. Places

where there are fire brigade entrance, water tanks, hydrants, emergency meeting places, walk ways, inflammable and explosive material stores, fountain system and toxic gases should be shown as well. Floor plans which show each details of the place should be drawn and several copies of them should be kept in an accessible and safe place.

PSYHOLOGICAL FIRST AID

Disasters are events which mainly interrupt the life and cause financial and moral losses; so they shatter our belief in world as a safe place and cause many psychological changes with all these aspects. The generated psychological reactions develop according to the severity of the disaster and the pre-disaster personality and the experience of the person.

The first period after a disaster is named as acute phase. In this process emotions like physiological arousal, disbelieve in what is encountered and assuming everything is a dream, fear, anxiety, guiltiness, anger, stress, helplessness, sadness and distrustfulness are observed.

In daily routines an over excitement, restlessness, sleeping problems, loss of appetite, an increase in the use of alcohol/cigarette might be observed. There appear mental problems related to memory and attention and the victim of disaster complains about memory and his/her lack of attention. Problems of repeating thoughts and dreams about the disaster are observed, also.

We can name the secondary phase as the reaction phase. The disaster victim avoids from every situation and stimilus that remind him/her the disaster. Stresses, fear, restlessness, depression, a sense of being isolated and lonely are among the observed feelings. In this phase dreams and nightmares disturb the person. And surviving but not being able to help others might cause a sense of guilt.

The third phase is the recovery phase. In this phase the reactions given after the disaster lose their intensity. The disaster stricken shows more interest in daily life and starts

dreaming and planning about the future. Now the person recovers himself/herself emotionally. These three phases and their reactions mentioned here is the most common encountered psychological table after a disaster. Just as some buildings get more damages after a disaster, more severe psychological effects can be seen on some people after a disaster. In such a case which is defined as "Post-traumatic stress disorder" there is the need of a professional treatment.

Post-disaster psychological first aid is extremely important. General trainings to identify normal behaviours in abnormal situations, to learn how to treat people who are under stress and to define and practice the ways of coping with trauma should be taken.

Emotional Evaluation: Discuss with your students how they have to act during an earthquake. Tell them it is very normal to be afraid, anxious and physically sick. Some people react to fear by crying and some by laughing. Talk to your students about how they can help their class mates to be less frightened and anxious after an earthquake.

It might take time for the students' families or acquaintances to get school so everybody must be ready to wait in patient. Students might be very anxious to learn what happened to their families, further they might "get sick because of the anxiety". Enable the students to discuss how to spend time and how to help each other not to be anxious. Ask whether the families have a disaster plan or not; it is possible that the students might have better ideas about the things should be done by the family members.

EXERCISES

It is scientifically proved that disaster and emergency exercises and practices double the chance of acting correctly without getting into panic during a real disaster. Therefore exercises related to Disaster Emergency Aid Plan are applied under general and separate headings. There is at least one general exercise in a year.

Monthly exercise subjects are these:
- Gas leak
- Fire
- Search&rescue
- Evacuation
- First aid
- Earthquake

Single or more than one exercise/drill is planned and applied under these titles. Although the exercises might be applied within the structure of the school, they might be applied as co-operational exercises between the neighbour corporations and associations.

Everybody in school needs to be trained about the subjects like emergency exits and meeting places. In order to prepare a training plan first the definitions of tasks should be made. The need for training and information of the personnel, students, visitors, parents, suppliers, managers

and those who take responsibility in emergency response should be determined and a training program should be prepared according to them.

For a twelve month period training those should be determined:
- Who is going to take which training?
- Who is going to give the training?
- Which training devices are going to be used?
- When and where the trainings are going to be made?
- How the evaluations and the documentations of the trainings are going to be made?

Trainings might be applied in a few ways:

Seminars: They are the discussion meetings regularly done and require mutual information sharing, answering the questions and defining the needs.
Table Top: The meetings that the emergency management group members come together and study on the generated scenarios, tasks of each member, and the things to do during an emergency.
Exercise: Emergency management group and response teams, practically show what they are going to do during the crisis. Especially some trainings are organized in some specific fields like first aid, alarm and warning.
Evacuation Exercise: School personnel determine the possible hazards while using the evacuation roads defined on the plan and inform the emergency management group about them after the exercise.
Real like Exercise: A real like emergency case scenario is prepared. Personnel, emergency response teams, management and local community organizations participate in these kinds of exercises.

In the next page the preparedness and application process of an earthquake and evacuation drill that might be done by the whole class is exemplified. Check the stages of the class earthquake exercise with the students and make them repeat Drop-Cover-Hold exercise at certain intervals.

In order to evaluate the subjects under the title of "Earthquake Exercise" apply the Drop-Cover-Hold scenario that we have fictionalised in the next page.

The teacher apply the things that should be done while reading the scenario text for the purpose of portraying a Drop-Cover-Hold exercise. After animating the Drop-Cover-Hold exercise make discussions according to the SITUATION 1 and 2 and try to consider the event from different perspectives.

EARTHQUAKE EXERCISE

During a detrimental earthquake the things that would provide life safety should be practised immediately. During an earthquake there will be no time to decide what to do in the next step; so everybody must know how to act beforehand. After an earthquake there might be the need of some vital activities like an emergency evacuation or first aid response; well-trained personnel and students might accelerate the process of taking these critic steps.

Earthquake exercises and practises are an important part of your preparedness plan and have benefits like these:

1. It teaches the students, personnel and parents how to act in a chaotic situation resulted from a real earthquake.
2. It enables you to evaluate how the each step of your Disaster Emergency Aid Plan works and how well your personnel and students are trained.
3. It paves the way for reflecting everything learned in each exercise to the plan and for making necessary changes.
4. It enables you to notice the conditions particular to your school.

Comprehensive exercises that contain everything must be done during and after an earthquake once or twice in a year. The week of 12 November is the week of "The Commemoration and Preparedness of Earthquake" in Turkey. Prepare your programme activities, your presentations about earthquake hazard and your preparedness planning according to this date if it is within the bounds of possibilities.

The preparations and the content of earthquake exercises: It is useful to train the students and the personnel with pictures and graphics in order to make the effects and the potential damages of an earthquake more understandable. Meanwhile both the structural and non-structural damages should be discussed.

The aim and the process of the plan and the exercise must be discussed before the exercise. If all the students and the personnel know why to act in such a way they might adopt themselves to these performances in a quicker and more consentient way. The necessary exercise activities are mainly like these:

1. Teachers: Apply Drop-Cover-Hold position and other recommended activities and exercises in your class.
2. Managers: Use the suggestions in exercise preparations and evacuation plan development check list to decide which steps should be taken in which order.
3. Develop a scenario to test different parts of your preparedness plan by following the suggestions in the exercise preparations. Use Drop-Cover-Hold position, recommended activities and exercises and the suggested points in the evacuation check list.
4. Each team should test their Disaster Emergency Aid Plan by performing an "Evaluation" exercise in which they discuss their own responsibilities. Use the team tasks' check list and exercise evaluation form for evaluations and adjustments.
5. Test the response plans that you have developed with a general exercise. Ask for help from the local fire brigade, emergency service units or Provincial or District national education directorate.

DROP-COVER-HOLD SCENARIO

Suddenly you hear a noise and a roar. The roaring noise become more increased approximately in ten seconds. And then HERE a terrible shake! As if someone has just put on the brake or a truck has just crashed into the wall of the building at that moment.

You hear someone calling "EARTHQUAKE! DROP AND COVER". As if the ground is sliding under your feet. It is difficult to stand up even to keep your position.

You calmly get under your desk and cover as quick as possible. You listen carefully to what your teacher says.

The shaking and the noise might continue nearly 60 seconds. (One of us is going to keep time by counting. The responsible "time keeper" will start counting time in a low voice when the shaking starts.)

The building is cracking and crackling. The books are falling down from the shelves. Suddenly a water pot is falling and breaking into pieces. A window is shaking and crackling and glass pieces are falling apart. Your desk starts sliding a little.

You hear the noises outside. Dogs are barking, cats are meowing, a baby is crying. People are shouting and screaming. You hear the thuds of the crackling and falling parts of the chimneys and other loose parts of the building. Trees are swaying or clashing to each other.

The paintings on the walls are loosening and falling down. The drawers and the desks are opening and sliding from one way to other. Lamps are disconnecting and falling down.

The door is opening and closing. BAM! It is snapped now. And there is a silence. The shaking is over and the class becomes quiet. (The time keeper now stops counting)

"Everybody back to your desks!" Now it is important to sit in silence and wait for the directions for the things should be done after this. If the evacuation of the building is a reasonable way then the school management informs us about this. Then I will lead you out to a safe place. Prepare yourself to the aftershocks and new shakings so be ready for the repeating shakes.

Look around, is everybody all right? Is there any injuries? If there is inform me.

SITUATION 1: At midday and all the classes are full. You feel a sudden quake and give the warning of "Drop-Cover-Hold". A few seconds later the building starts to shake again but this time stronger. The window glasses are broken and they spread over the students. Lamps and other unfastened objects fall on the desks. Heavy objects do not injure the students but broken glass pieces caused small scratches. Electricity is cut off and you are waiting for a decision for the evacuation.

Discussion points

- Who is going to decide for the evacuation and how is this decision going to be delivered to the classes on time? (Remember that the electricity is cut off)
- What is the teacher going to do while waiting for the evacuation decision?
- How can the anxieties of the students be reduced by taking into account that the aftershocks keep on happening?
- Is there any prevention or mitigation of any of the non-structural risks?

SITUATION 2: The clocks show 02.30 pm and an earthquake with 7 magnitude has just happened. You immediately make the call of Drop-Cover-Hold. Many of the highways and roads are damaged or blocked with cars and debris. It might take hours for the roads to open. There are some damages in the school building but many of the students are just psychologically shocked and ready to go home. Electricity, water, what is more important the phones are not working.

Discussing points:

- Is it clear how the students are going to be brought together with their parents?
- Which process should be followed before delivering the students someone other than their families?
- How are the security of the school and the counting of the students going to be provided?
- What kind of preparation is made to keep the students for the whole day or nightlong?
- Who are assigned as guards to stay with the students in the school all night if required?

In order to determine whether the earthquake and the tasks related to it are practised correctly and well during the exercises in schools or not an exercise check list similar the one below should be developed and used:

Drop-Cover-Hold

☐ The teacher showed the Drop-Cover-Hold drill by doing it.
☐ The students were aware of the correct procedure.
☐ The students were in their dropped-hold-covered positions.
☐ The directives of the teacher were clear and correct.
☐ The teacher first checked his/her own situation and then evaluated the conditions.
☐ The teacher wanted the students to control themselves and their friends.
☐ The teacher evaluated the condition of the class before the evacuation and waited for every one to calm down.
☐ The teacher checked the co-teacher or co-class.

Aftershock (two minutes after the main shock)

☐ The teacher showed the Drop-Cover-Hold exercise by doing it.
☐ The students were aware of the correct procedure.
☐ The directives of the teacher were clear and correct.
☐ The teacher first checked his/her own situation and then evaluated the conditions.
☐ The teacher evaluated the condition of the class before the evacuation and waited for every one to calm down.
☐ The teacher checked the co-teacher or co-class.

Special Cases: If there was a planned or unplanned special case how was it reacted?

Evacuation and Counting of the students

☐ Evacuation procedure was practised in the correct way.
☐ The students were sitting while the teacher was having a roll call in the meeting place.
☐ The daily attendance form for students was sent to the Incident Command Centre.

If there is not any serious "injury" the teacher evacuates the class starting from the front and back desks in turn with the co-teacher. If a teacher can not start the evacuation process, he/she evacuates the co-teacher's class as well. If a student gets injured and can not be moved, one of the teachers stays in the class with the injured student and the other one evacuates two classes to take them to the meeting place.

Special Cases: When there was a planned or unplanned special case how was it reacted?

Aftershock (nine minutes after the main shock)

☐ The teacher sat or crouched down.
☐ Students sat or crouched down.
☐ Directives of the teacher were clear and correct.
☐ The teacher wanted the students to control themselves and their friends.
☐ The teacher evaluated the condition of the class before the evacuation and waited for every one to calm down.

Comments :----------

Logistics

☐ Emergency bags or kits were opened when the students arrived to the meeting place.
☐ Logistics and care teams gave food packets to the students when it was necessary.
☐ Incident Command Centre was supplied with tables, chairs and other materials.
☐ The search and rescue materials and equipments were made ready.

Command Centre

☐ Incident commander was always in the incident command centre during the exercise.
☐ Incident commander observed the meeting place of the students and the personnel from the command centre.
☐ A recording official recorded all the events.
☐ Team leaders gave reports to the incident commander all the time.
☐ A communication official prepared the incident situation report and had it approved by the incident commander.
☐ The communication official transmitted the Emergency Report to the Provincial/District/Campus Crisis Management Centre (or EMC).

Search and Rescue

☐ The number of the teams:_____
☐ The team leader was on duty.
☐ Response chief or team leaders made the assignments; checked the equipments and the wireless settings of the teams.
☐ The teams were first sent to the places with high priority.
☐ Each member of the teams was equipped in an appropriate way (with suitable shoes, vests, helmets, dust masks, glasses, whistles, flash light).
☐ Search and rescue teams searched the whole areas they were assigned to.

Health Care Team

☐ The number of the assigned personnel: _____
☐ Emergency medical response centre was established in somewhere that could not be seen from the students' meeting place.
☐ First aid kits were brought to the emergency medical aid area.
☐ Carry cots and stretchers were prepared.
☐ The victims were brought and "treated".
☐ All the emergency medical treatments were recorded by using First Aid Information Form.

Comments:----------

Deliverance of the students to the parents **Application Centre**

The number of the personnel assigned : _____
The number of the volunteers assigned: _____
The number of the parents whose applications were put in process: _____

☐ Tables and chairs were made ready.
☐ The families and parents were treated respectfully. The identity information of parents was checked.
☐ There were messengers/carriers who were running between the application centre and the school building/classes.
☐ Student deliverance forms were prepared beforehand.

Deliverance of the students to the parents **Delivery Place:**

The number of the personnel assigned: _____
The number of the volunteers assigned: _____
The number of the parents whose applications were put in process: _____

☐ Tables, chairs and other materials are prepared.
☐ The families and parents were treated respectfully. And their identity information was checked one by one.

Comments:----------

EVACUATION EXERCISE

The check list below is prepared as an example for the development of evacuation plan:

A. Organisation

In order to make the points below operate some preparations are made and tasks are appointed:

- ☐ Defining the appropriate evacuation roads.
- ☐ Informing the students and everyone in school about the evacuation ways and evacuation area.
- ☐ Evaluating the safety of the emergency meeting place.
- ☐ Opening the evacuation road or arranging a new one.
- ☐ Giving the evacuation order.
- ☐ Transmitting the directive to the others.
- ☐ Lending assistance for evacuation.
- ☐ Helping disabled people.
- ☐ Counting all students and personnel.
- ☐ Turning off all wirings and devices.
- ☐ Providing building safety and controlling the evacuation of the students.
- ☐ Recording the decisions taken and the evacuated students.
- ☐ Putting into service the buildings again or announcing another plan.

B. Emergency

It is DROP-COVER-HOLD drill that everybody is going to do during an earthquake. There is no evacuation during an earthquake; the stairs and the elevators which might be the most hazardous parts of buildings should be avoided.

C. Evacuation Orders

The points that should be paid attention are these:

- ☐ There can be no evacuation immediately without making plans.
- ☐ You should have the criteria about when to avoid an evacuation.
- ☐ There are some steps in an evacuation and each step should be known when to perform.
- ☐ The conveying process of the order should be comprehensible (clear) to everyone.
- ☐ For other information it is necessary to get information from the command centre.

D. Evacuation Process

The things below should be practised:

- ☐ Control of the whole areas and the counting of all people.
- ☐ Checking the safety of the evacuation road and area.
- ☐ Defining whether there is the need of an evacuation or not.

E. Assemblage and Responsibility

You should have a system and a team for the things below:

- ☐ Making a statement to everyone.
- ☐ Sending the record results to the Command Centre.
- ☐ Defining the people who might be more in need of medical assistance.
- ☐ Reporting the needs to the inside and outside first aid and rescue teams.

F. Ensuring the Building Safety
You should have a system and a team for the things below:
☐ Controlling the building safety.
☐ Reporting all findings to Command Centre.
☐ Closing all school doors excluding only one.
☐ Keeping the deliverance of students to their parents or other people under control.
☐ Making connections with other charitable organizations.

G. Carrying Out the Evacuation
You should have a system to decide those:
☐ Carrying out the evacuation.
☐ Coordination of the reopening of the buildings.
☐ Taking the evacuation order of the students as quick as possible or completely evacuating the building and going somewhere else.

Discussion points
1. Tell your students to bear in mind the dangers they see around them while evacuating the building from the usual fire exercise way. When you arrive to the predetermined meeting place, talk to your students about the dangers they notice. A probable list of such hazards might be as it follows:
☐ The electricity is cut off (Is there any emergency lightning?).
☐ There is debris stacked on the corridors and stairs: the falling parts of the ceiling and the removing plaster can be seen.
☐ The corridors are bunged up with falling objects and glass cabinets.
☐ There is smoke in corridor.
☐ Outside doors and windows are stuck or are not opening.
☐ Aftershocks might happen during the evacuation. (In this case students should take their Drop-Cover-Hold position immediately.)
☐ There are bricks, broken glass pieces and debris stacked outside the building and electric wires on the ground.

When you turn back to class discuss with your students how the hazards can be mitigated and/or how they can cope with them.
2. Explain to your class that first of all each student is responsible his/her own life safety during a big earthquake. Still each student should learn he/she must help an injured person. Ask "What if" questions to enliven the discussion.
☐ What if your teacher gets injured?
☐ What if somewhere of a student is cut and bleeding?
☐ What if a falling lamp or a heavy object hits someone?
☐ What if a student goes into shock because of the earthquake?

IX. MUTUAL AID

There might be the need of several external sources during a disaster. In some cases it might be necessary to contact and make deals with the corporations mentioned below beforehand:

- Province Disaster and Emergency Directorate
- District Disaster and Emergency Directorate
- Fire brigade
- Inflammable, explosive and hazardous material response authorities
- Emergency service
- Hospitals
- Security-municipal police
- Local management service departments
- Relevant departments of ministry, governorship and district governorship
- Building companies, caterpillar parks
- The corporations that provide emergency equipments.
- Insurance companies

Apart from these, mutual aid protocols with close buildings and agreements with relevant corporations and associations should be made for an emergency response. And also it is necessary to participate in the response, rescue and aid exercises developed according to different scenarios and all local government agencies and neighbour schools are invited.

AGREEMENTS

First of all the contact information of corporations and associations from which some help would be received without any protocols in an emergency should be defined. And then, these protocols should be organized for mutual aid and cooperation during a disaster or emergency. At this point a mutual aid should be made with those associations:

- With the service firm for the transportation of the personnel to ..... Command Centre.
- With Turk Telekom and private companies to be given the priority when there is a problem with the phone lines.
- With relevant companies for the agreements related to the wireless use and satellite phones.
- With ..... for equipments, infrastructure, and network management.
- With catering-firms for food-drink supplies of Command Centre.
- With close hotels for accommodation of Command Centre personnel.
- With security firms to provide full support during an earthquake.
- With call centre firms to be able to answer all reports that come to the centre during the scenarios with large earthquakes.
- With architect associations and chambers for providing an expert.
- With insurance companies for personnel support.
- With courier and cargo companies to avoid any disorder and crowd.
- With banks to provide the advance payments and compensations in a short time and make transaction in mobile satellite branches.

A protocol should be made with adjacent associations and corporations on the purpose of mutual aid and assistance in case of a fire. In this protocol the subjects below should be stated:

- Training and information interchange.
- Standardizing the equipments and materials used.
- Performing common exercises.
- To know in what conditions fire fighting is possible.

VOLUNTEERS AND NGOs

The volunteers who arrive first to the incident place and help the victims are the people, who appear by themselves, the citizens who want to help without any organization and training or proficiency or the ones with some qualifications as a result of their jobs or education and want to response the event correctly. The great part of emergency response is applied by these volunteers without obeying any order or security rules. Therefore on the one hand volunteers are seen as great sources on the other hand they are seen as a source of problem.

That's why social organizations and relevant departments should be contacted with to provide awareness for emergency and disaster preparedness and response. In addition to that the associations should cooperate with the local headman, municipal, district governorship about hazard mitigation, preparedness, response and recovery for disasters. Especially designating trained, skilled, professional or supportive volunteers about disasters is very beneficial

X. EMERGENCY EQUIPMENTS

It would not be possible to leave the school after a detrimental earthquake. And also emergency service may not arrive your building on time. Under these conditions you may have to spend 72 hours or more in the school building.

Therefore keeping the urgent needs like first aid kits, water, equipments and food in a safe place is the most crucial part of your preparedness plan. It is important that these supplies are fresh and not expired. At the same time an inventory of the needs should be made and their places should be recorded. It is a good solution to leave the providing and stocking of the materials that we have to a special team.

DO NOT FORGET: It would not be possible to keep ready all the necessary materials at the same time; but get these basic vital materials written on the list below:

- Sufficient first aid supplies
- Flash light and extra batteries
- Extra fire extinguishers
- Search and rescue materials
- Sufficient water and drink for everyone in the building
- Blankets and thick plastic bags
- Medical supplies
- Drugs which do not require any prescription

Prepare a time schedule for the procurement of the materials that might be needed after an earthquake by putting them into an order of priority. For instance; first aid kits are more important than water and water is more important than food.

You can provide other materials that you need by extending over it a period of time.

In order to define possible needs of emergency teams examine the examples below:

Information and Planning Centre

- Existing Disaster Emergency Aid Plan
- Evacuation, fire, civil defence, etc. plans
- A sketch of needs store
- Position and floor plans

Administrator/Manager/Incident Commander

- The list of students and personnel
- The list of emergency tasks
- School plan
- Evacuation plan
- Board
- Wireless
- Megaphone
- Battery operated radios and extra batteries
- Paper and pen, fax, computer, printer

Teachers

- Student list
- Emergency kit of the students

First Aid Team

- Health cards for each student and personnel
- Emergency cards
- First aid kits

- First aid equipments (blankets, etc.)
- Flashlights
- Paper and pen
- Board
- Evacuation plan
- ID band or arm band

Search and Rescue Teams
- The list of students and personnel
- School plan
- Fire extinguishing devices
- Flashlights
- Wireless
- Key, pliers and screw driver
- Levers and fireman's axes
- Spade and rope
- Gloves, face masks, glasses
- Helmet

Security and Evacuation Team
- School plan
- Evacuation plan
- Important keys
- Wireless
- Sign cards and writing tools
- ID band or arm band
- Megaphone

Social Aid Team
- Wireless
- Sign cards and writing tools
- ID band or arm band
- Students' list and emergency information
- Megaphone

Fire Team
- Fire extinguishing devices (A,B,C type)
- Gloves
- Spades and axes
- Wireless

Technical Repair Team
- School plan (plans that show water, electricity and gas wirings)
- Tools to turn off the valves
- Fire extinguishing devices
- Evacuation plan
- Plans of needs store
- Medical needs
- Paper and writing tools
- Food and water

Emergency kit: every school should provide the things suggested on the first aid supplies list below. Each class should have a first aid kit for necessary situations.

First aid supply lists can be organized as it follows:
- First aid handbook
- Bandages and dressing materials (band-aid, 2 large rolls, sterile bandage, 2 and 4 rolls, cotton-hollow yarns, bandaging materials, gauze dressing 4 x 4, latex gloves etc.)
- Scissors
- Nippers
- Thermometer
- Hooked needle
- Sanitary pad
- Front protective cover

Medical supplies needed in case of an emergency: medical kits should be packed separately and should be used in the case of an emergency only "if required"

The materials prepared for emergency period should be unitised according to the number of the students in this way:

Number:	1-750	1 set
Number:	751-1500	2 sets

Medical needs that are listed in the next page should be provided to keep in the places like infirmary, nurse's room and health cabinet.

MEDICAL NEEDS (for 750 people)

- 3 Sterile gauze bandages (7,5 x 7,5 cm)
- 12 Alcohol (rubbing alcohol) (1 lt)
- 1 Ammonia refresher (in 10 packs)
- 1 Applicator (sterile, 6,5 cm)
- 1 Carbonate
- 1 Bandage scissors (15 cm)
- 1 Bandage, beta fix (5 cm x 10 cm)
- 1 Elastic bandage (6 cm)
- 10 Elastic bandages (13 cm)
- 20 Arm slings
- 3 Chlorine tablets
- 1 Bandage
- 10 Eye drops
- 20 Packed tissues
- 3 Eye bandages (sterilized)
- 20 Gauze bandages (7,5 x 7,5 cm)
- 1 Flash light and batteries
- 10 Gauze bandages (5 cm)
- 2 Gauze bandages (10 cm)
- 1 Non-aspirin tablet
- 1 Paper towel
- 1 Plastic bags
- 20 Plastic wrapping papers
- 2 Oxygen tube sets (1 adult, 1 student)
- 2 Hooked needles
- 1 Salt (1 kg)
- 2 Napkins
- 1 Sheet
- 1 Soap (liquid and water-free)
- 10 Splints (18)
- 3 Splints (24)
- 1 Stretcher
- 24 Band, paper glue (1"x10 m)
- 1 Band, paper glue, 2"x10 m (new)
- 1 Tongue holders
- 10 Nippers
- 1 Vaseline (in bottle)
- 1 Water (sterile, 20 lt, in plastic bottle)

Make a list of the missing materials and provide them in every six months.

Non-medical Emergency Supplies and Equipments: In addition to the medical supplies, other devices and equipments on the list below should be kept available in schools.

CLASS DISASTER KIT

THE TOP OF THE KIT

- Flash light and extra batteries
- Radio and extra batteries
- Whistle
- The class list of the students and families' names, phone numbers and addresses written on a water-proof material (This list includes the names and the phone numbers of the family and the friends for house and car emergency (evacuation) bag).
- Paper and pen
- White board marker
- Coloured flag to call for help
- Adhesive tape
- Water-free soap
- The medicines of the students who are on medication
- First aid kit
- Vaseline
- Tissues and toilet papers
- Pocket knife
- Wet napkin
- Water purification tablets
- Tin opener
- Some toys

MIDDLE PART OF THE KIT

- Water (three day water if possible)
- Food
- Skimmed milk powder
- Juice powder
- Canned juice
- Canned food (fish, peas, etc.)
- Cracker, biscuit
- Dried fruit
- Peanut butter
- Sugar, chocolate

BOTTOM OF THE KIT

- Plastic bottle and water glasses
- Game cards and pocket games
- Books
- Blanket
- Some extra underware

EMERGENCY NEEDS AND EQUIPMENTS (schoolwide)

- Axes
- Blankets
- Megaphones, battery-operated radio and extra batteries
- Tin opener (handy, simple)
- Lantern and gas
- Lever
- Glass (paper or plastic)
- Fire extinguishing devices
- Flashlight (with extra batteries)
- Hammers
- Helmets
- Hose for fire extinguishing and water
- Knives (for hard works)
- Floodlight
- Masking tape
- Wax matches (friction matches)
- Buckets
- Picks
- Plastic trash bags- for hard works (two per student; to keep warm; to protect from rain and for hygiene)
- Black plastic cloth in 1 m width and 30 m length and in a canvas thickness (to protect from rain and to use as a curtain)
- Plastic water barrels (4 x 200 lt)
- Nylon thread
- Hand saws
- Screws
- Spades
- Stretcher
- String
- Wool underware
- Toilet paper
- Battery operated radio (with AM-FM bands) and extra batteries
- Hand-held radio and extra batteries
- Sticks that might be used in making a stretcher
- Wire
- Wire cutters
- Screw spanners

Distribution of all these equipments among the teams should be done by taking into account the personal needs of the team members.

BASIC EMERGENCY NEEDS THAT ARE GOING TO BE STORED UP

The materials that might be needed during a disaster or emergency should be included in Disaster Emergency Aid Plan and in addition to the meeting place another place for these materials must be provided. These emergency supplies must be kept under control by an inspector or another logistics personnel to ensure a proper distribution and to provide the transport of the goods on time.

Prepare yourself to survive without getting any help from nowhere in the first 72 hours. Provide the emergency kits listed below and keep them in a safe and easily protectable place. Some of the equipments mentioned before should be kept in separate bags that an individual can carry on his/her own in case of an evacuation. Besides do not forget the specific kits for disabled people. Your disaster bag should be kept in a safe place with your other emergency kits.

Basic Emergency Needs (minimum)

- First-aid kits, first-aid handbook
- Flashlight with batteries and radios
- Emergency generators, power supply
- Medical needs (the unusable condition of toilets, waterproof plastic bags and bands, toilet paper, hygienic items for women and babies)
- Blankets
- Stretchers or alternatives like doormats, carpets, blow-up beds.
- Cleaning supplies like brooms, waste bins, big or small plastic bags, soap, paper towels, buckets and disinfectant
- Shelter board/sign (for recognition and accessibility)

Water for three days (minimum)

Four litre water bottles and 8 drops chlorine disinfectant for each or 5-4 lt sterilized sealed bins are necessary.

2 lt of water for a person's daily drinking need and 4 lt of water for every daily needs are considered enough. The water in thermosiphons and reservoirs can be made use of for some needs during an emergency.

Drinking water is the most important thing; but extra water is necessary for cooking, bathing and using the toilet. There is some stored water as a part of the system in the schools. Thermosiphons are filled with water. In the toilets' reservoirs (if there is no chemical material) we have 5-10 lt of water to use. It is necessary to avoid flushing the toilets until we learn about the situation of the canalisations and the water.

Water can be kept safely in 5 lt bins. The bins should be disinfected with bleach before using them. The bleach is used as a disinfectant so the bins should not be rinsed immediately. This water should be changed in every six months and the bottles should be used again after cleaning them. It might be useful to keep, 5 lt sterilized sealed water.

If water is not cut off after an earthquake the water in extra bins might be used for toilet needs and bathing. This water must be clarified before using it for drinking because city water might be polluted as a result of a leak after an earthquake.

How can be the water purified?

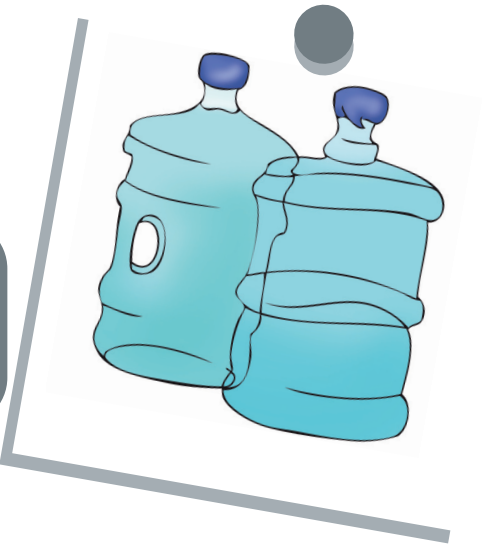
Boiling: Boil the water from 1 minute to 3 minutes and decant it many times to make it taste better.

Clarifying tablets: Use these tablets that you can get from any drugstore according to their prospectus.

Clarifying with bleach: The product for home use can be used. The bleach must contain hypochlorite. (Preferably at the rate of 5, 25%)

Add to water and stir according to the table below:

Amount of water	Clean water	Dirty water
1 litre	2 drops	4 drops
4 litres	8 drops	16 drops
20 litres	1 dessertspoon	2 dessertspoons



Three days food supply (minimum)

A. Recommended durable foods and drinks: canned meat, vegetables, white beans, dried nuts and fruits, biscuit, fruit, juice, soft drinks.

B. Recommended dried foods: cereals, peanut butter, cracker, frozen dry food, energizer foods, coffee, tea, milk powder, sugar, candy, pulp powder (to make watery), ready soup.

C The equipments recommended for food service

- Tin openers (mechanical)
- Plastic spoons, forks
- Saucepans, fryers, spoons, ladles
- Mesh trays
- Kettles
- Camp burners
- Paper glasses, plates, bowls
- Matches
- Napkins, towels

If you do not have a cafeteria in your school: Make sure that each student brings his/her earthquake kit to school. Durable and non-perishable foods like chocolate, canned juices, dried fruit packs should be placed into the earthquake bag. The amount of the food must be enough for a student during the first 72 hours. All of these bags can be kept in a big, plastic barrel in class. Students can organize a party and eat the foods in their bags at the end of the semester in case there is no earthquake.

If there is a cafeteria in your school:

- Change the foods alternately before their expiration dates and make sure that they are not stale.
- First use the foods in the refrigerator and than the freezer after an earthquake. Although the main shock may not cause a power cut the aftershocks or the fires may cause it.
- When you open the fruit or vegetable cans do not spill over the water in them. They might be useful as another water source during a water shortage.
- Do not use any food or drink in open basins close to the broken glasses. Filter the suspicious liquid with the help of a clean handkerchief or cheesecloth.

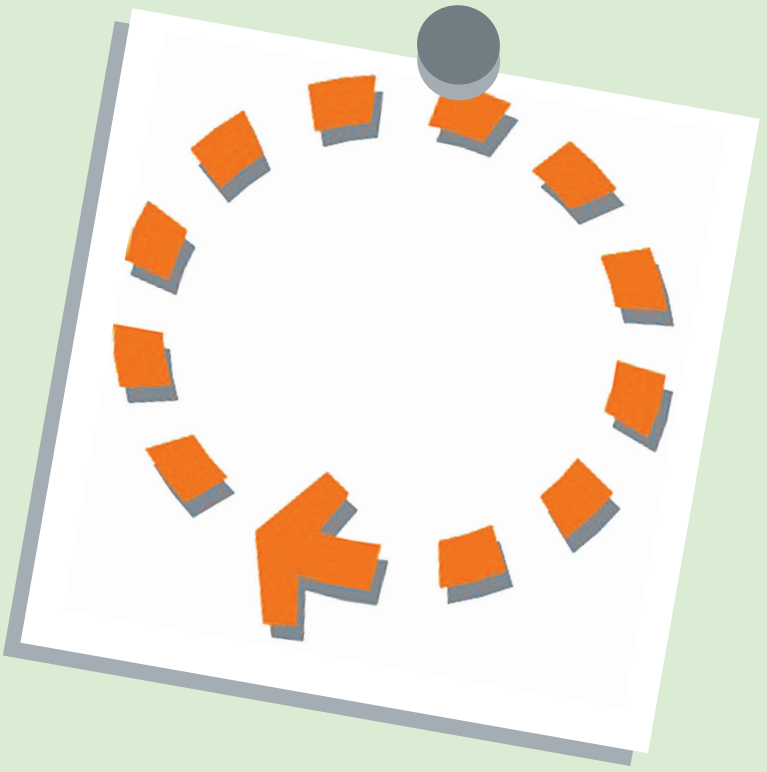
Emergency and infirmary first aid kits and equipments like the ones above should be kept in schools within the scope of Disaster Emergency Aid Plan. The amounts and the capacities of these equipments and materials might vary according to the sizes, specialities and locations of the schools. Sufficiency and currency of these materials should be checked with periodical needs analysis.

Food: Most of the food reserves must be imperishable and should not require a refrigerator or reheating after opening them. Food should be considered as something with low priority except for the individuals who have a special diet because of diabetes or any other health problems. One of the methods is to buy foods at Christmas and donate them to charities before their expiration dates or consume them during the exercises. Packed foods like wafer or chocolate which are energizing and easy to share are useful. Before anything else since hard candies are useful they can be kept as well. Three days food need for the personnel must be taken into account in storing.

Consume available canned, dried, imperishable foods, dried fruits and canned juice regularly by paying attention to keep them fresh. Do not forget the can opener!

Storing: Food depots must be waterproof, clean, safe against stealing, and air cooled places and should not have any insect or microbe; and the fans must be small enough to prevent any kind of robberies. The depots must be in shadowy places away from the hazards. In case some shelters are used, necessary precautions to keep the materials on the shelves safe during an earthquake must be taken, all the materials must be fastened to the shelves. A few people in or outside the school should have the depot's key but the consumed food or the material used must be replaced immediately.

Some schools can buy a cargo container with a used fridge and use it. The container should be placed on a flat surface, avoid from any dangers and preferably in a shady place. The keys of these cabinets should be given to the local fire units to enable them use these materials in case of any emergency on the condition that they will replace the items they used in 72 hours.



APPENDIXES

1. Check List of Disaster Emergency Aid Plan
2. Examples for the Parts That Should Be In a Disaster and Emergency Plan
3. Family Disaster Plan
4. Examples for the Points That Should Be Taken Into Consideration in Hazard Analysis
5. An Example for the forms Indented for Defining Hazard Profile
6. Examples for the Degree of Influence in Different Categories
7. Defining the Priorities According to the Results of Risk Analysis
8. An Example for Hazard Hunt Form for Classes and Offices
9. Examples for the Signs Used in Plans
10. An Example for Hazard Mitigation Plan
11. An Example for Information Cards
12. Fire- Scene Check List
13. An Example for Standard Operation Procedure
14. School Emergency Report

Appendix -1. Control List of Disaster Emergency Aid Plan

		Yes	No	Not Sure
1	Do you have an emergency plan including all possible hazards?			
2	Is the plan made after hazard analysis and is it multipurpose?			
3	Does the plan include hazard mitigation?			
4	Does it include the response for the whole hazards?			
5	Does it include recovery for the whole hazards?			
6	Is the plan developed with the mutual aid of local emergency units (fire department, gendarmerie, etc.)?			
7	Is there an incident command system in the plan?			
8	Is there made any back up while determining the incident command system staff and are their responsibilities clarified?			
9	Is there any system that determines the validity of the plan for the whole staff in the facility?			
10	Does the plan include the primary and the secondary evacuation ways?			
11	Is the plan tested with regular exercises?			
12	Do the relevant departments participate in exercises?			
13	Are the outdoor and indoor exercises made separately?			
14	Are the shelter in place/lockdown exercises made?			
15	Is there an exercise developed for the worst possible situation?			
16	Are the secondary evacuation ways tested by blocking the main exits in evacuation exercises?			
17	Is it clarified whether the plan is understood by the staff or not during the evacuations?			
18	Are the evacuation exercises made in cold weather as well?			
19	Is there the necessary system to update and check the plan regularly?			
20	Have you read the plan?			
21	Do you know where the plan is?			
22	Is your plan examined by professionals and local emergency manager?			
23	Do you know the name and the contact address of the emergency manager in your country?			

Appendix -2. Examples for the Parts That Should Be In a Disaster and Emergency Plan.

COVER
COVERING LETTER
APPROVAL PAGE
TABLE OF DISTRIBUTION
AMENDMENT REPORT TABLE
INDEX

FIRST PART: MAIN ELEMENTS
1. AIM
2. CONTENT
3. LEGAL BASIS
4. RESPONSIBILTY
5. DEFINITIONS
6. MAIN PRINCIPLES
7. ENTRY INTO FORCE
8. PROPOSES
9. ENFORCEMENT

SECOND PART: GENERAL SITUATION AND PREPARATIONS
10. BUILDING KNOWLEDGE
11. PERSONNEL KNOWLEDGE
12. EMERGENCY PHONES AND PHONE CHAINS
13. PRECAUTIONS
14. DISASTER TRAINING AND EXERCISES
15. ANNUAL WORKING PLAN

THIRD PART: EMERGENCY SERVICES
17. COORDINATION
18. COMMAND CENTRE
19. RESPONSE SERVICE
20. INFORMATION AND PLANNING SERVICE
21. LOGISTICS AND MAINTANENCE SERVICE
22. FINANCE AND MANAGEMENT SERVICE

FOURTH PART: PROCEDURES AND CONTROL LISTS
23. EMERGENCY HEALTH PROBLEM
24. BOMB THREAT
25. EARTHQUAKE
26. CHEMICAL ACCIDENTS AND CBRN
27. FLOOD AND HEAVY RAIN
28. WIND STORM
29. SUSPECTED PERSON

FIFTH PART: VOLUNTEERS, MUTUAL AID AND COLLABORATION
MUTUAL AID

SIXTH PART: EVACUATION AND RAREFACTION
SEVENTH PART: MATERIALS AND EQUIPMENTS
1. EMERGENCY KITS FOR THE BUILDINGS
2. EMERGENCY KITS FOR THE CLASSES

APPENDIXES
APPENDIX-1 EMERGENCY FORMS
APPENDIX-2 EMERGENCY FLOOR AND LAYOUT PLANS

Appendix -3. Family Disaster Plan

DISASTER PLAN OF ..... FAMILY

The person to call out of the city
Name _____
City _____
(Home number) _____
(Work Number) _____

The person to call in the city
Name _____
(Home number) _____
(Work number) _____

Relative
Name _____
City _____
(Home number) _____
(Work number) _____

Work numbers of the family
Father _____ Mother _____
Other _____

Emergency phone numbers
In an emergency call 155 or 112 or call these numbers in your city:
Police _____
Fire department _____
Hospital _____

Meeting places
1. At home _____
2. Next to home _____
3. Away from home (if you can not return to home)
_____

Address _____
Phone _____
The first route _____
_____

FAMILY DISASTER PREPAREDNESS WORK PLAN AND CHECK LIST

- ☐ We have defined tne insecure places at home (for instance; window fronts, sides of big, heavy, rollable and flammable objects)
- ☐ We have put our torches and slippers next to our beds.
- ☐ We have learned the places of electric, water and gas valves and how to turn off them.
- ☐ We have bought a fire extinguisher device for our home and learned how to use it. We have a smoke detector at home and we have been changing its batteries two times in a year.
- ☐ We have planned to take or repeat a first aid course.
- ☐ We have prepared our first aid kit.
- ☐ We have prepared our disaster kit. The places and the preparation date of disaster kit: .....
- ☐ We have defined the evacuation ways from the building and marked them on the sketch.
- ☐ We have finished "Hazard Hunt" at home.
- ☐ We have fastened the rollable furniture.
- ☐ We have defined the secude places of our house.
- ☐ We have decided how to meet again.
- ☐ We have learned not to use any matches or lighters that might cause a fire until it is certain that there is no gas leak after a disaster.
- ☐ We have learned that we should use our phones only for emergencies and radios and TVs to get information.
- ☐ We have completed this plan in ..... and we have decided to go over our plan in every six months

112 Emergency (Ambulance)
110 Fire brigade
155 Police
177 Forest Fire
156 Gendarmerie
184 Health Consultation
114 Poison Consultation
187 Natural Gas
158 Coast guard

Plan and get ready!

Fill in this Family Disaster Plan with your family.

Put one of its copies into your bag and the bags of each family member.
And also, hang one of the copies to a visible place at your home.

Appendix -4. Examples for the Points That Should Be Taken Into Consideration in Hazard Analysis.

Health Emergencies like

- Heart attack
- Epileptic seizure
- Faints
- Poisoning
- Alcohol coma
- Arm and leg fractures
- Suicide attempts
- Drowning
- Burns
- Bleeding through the skin
- Nasal bleeding
- Heat/sun stroke
- Hand-foot frostbite
- Bug and snake bites
- Dog bites
- Sudden and over mental reactions

which might require first aid in your department should be evaluated by taking into consideration the features (whether they have or not) of your personnel.

Dam/ Pipe Fracture

- Destruction of dams in your city or the fractures on them might cause big floods.
- Natural and/or artificial lakes and ponds; city water supply pipes ; water and gas installations in the buildings and the possible oil and natural gas line facilities close to you are potential dangers.
- You should take into account the other water buildings like depots that might cause a secondary hazard during an earthquake or another disaster.
- Additionally, worn out and rusted water instillations in the buildings might cause small-scale floods by getting punctured in time. Therefore metal water instillations used for a certain time should be controlled carefully.

Boycotts/ Invasions/Strikes Any kind of

- Boycott and invasion acts
- Demonstrations of officials or workers like strikes

Earthquake:

An earthquake is a big natural disaster when we take into account the current building stock, construction quality and the probability of an earthquake occurrence.

- Earthquake hazard should be evaluated by taking into account the condition of the building and the positions (how safe the shelves are fastened to the walls, heavy objects on the top

shelves, keeping the explosive and flammable materials in the same place etc.) of the objects in it at the same time. Fastening the boilers to the walls, removing the heavy objects from higher places, fastening the cabinets with nails or screws, latching the cabinets to prevent the cabinet doors opening during an earthquake are important in order to minimize the risk.
- And also it should be paid attention that an earthquake might cause floods or fires.
- The evaluation of the landslide, earth flow, landslip and rock fall areas is of capital importance. (Great losses in an earthquake happen as a result of the fault motions in the settlements which are under the risk of a landslide.)
- The risk of floods arising from dams or as a result of tsunamis must be carefully searched.
- Designating gas pipelines under fire thread; and vulnerability risk of gas, water and electricity lines as a result of liquefaction or faulting should be taken into account as well.
- In addition to these, an earthquake might cause fractures in natural gas pipelines and start a fire.
- The case of building earthquake-resistant constructions or reinforcing old structures should be considered.
- The safest and the most insecure places during an earthquake should be determined, how and where to meet after an earthquake should be known and the evacuation ways from the building should be defined.

Frost/Hail/Icing:
Waves of cold air, freezing of people, waterworks, roads and bridges might cause some problems for your personnel and logistic.
- Winter conditions of the vehicles should be taken into consideration in order to prevent any possibilities that would hinder transportation and logistic support.
- Electronic equipments in offices should be preserved against static electricity as a result of low humidity in cold weather.
- Relative humidity of air indoors should be over %30 in order not to cause some health problems like headaches and sinusitis among the personnel.

Food poisoning/ Hazards related to foods/Common food consumption areas:
In some common food consumption systems like personnel dining halls and cafeterias of social facilities;
- There is always a possibility of common food poisoning. The afflictions might appear either in 2-4 hours or 8-12 hours following the food consumption. These diseases must be reported.
- First aid application for those who are out of breath while eating something is another important issue to dwell on.
- The possibility of a panic during a fire or a terrorist attack in these areas where hundreds of people might come together should be paid attention as well.
- The control of gas leaks by way of keeping LPG tubes avoid from fire sources, changing the old, flat and worn-out hoses and joint rings correctly is important.
- It should be careful about not to slide down on wet floors.

Hazmat/Explosives/Hazardous Materials/Gas Poisoning:
Explosive, inflammable, caustic, flammable, corrosive, toxic and other chemical materials are shortly named as “hazmat”.

- Hazardous materials in depots, laboratories and similar places where hazmat materials are kept are risky on their own and/or during a disaster.
- It should be detected whether the hazardous chemical materials like hazmats etc. are kept in the places out of children, animals and other uninformed people's reach.
- It should be paid attention whether the places where hazardous chemical materials like haz mats kept are conservative against frost or overheat.
- It should be defined whether these hazardous materials are kept on the floor or in lower ca - binets/shelves to prevent them falling and spilling over.
- It should be checked whether there are door latches etc. on the cabinets' doors, where the hazardous chemical materials like hazmats are kept, to prevent them opening during an earthquake.
- The explosion of kitchen or industry tubes is one of the most common dangers in our community.
- And also hazards like gas poisoning and gas compression should be taken into account as well. Therefore it should be checked whether there is any alarm detector for aspiration and gas leak in the places where tubes and natural gas are being used.
- The accidents (related to transportation) as a result of hazardous materials might concern you as well.
- Hazardous material risk (chemical spill and scattering, pollution) must be defined.
- Armouries, ammunition depots and arsenals around should be considered as potential hazards.

Tornado/Strong Winds:

Tornado that happen at sea or on land are seen through Anatolia apart from the north of Turkey though they are rare, they cause losses. Do not forget that it does not mean that a tornado will not happen since there has not been one observed in your city yet.

- Strong winds and/or tornado might lead transportation problems particularly at sea, in the air and on the land.
- Strong winds and/or tornado might cause large and small structural damages like the falling down of the chimneys or the collapsing of the buildings.
- Strong winds might cause stove poisoning in lower areas.
- The flying pieces that are separated from trees or chimneys because of strong winds or tor- nado might cause loss of life and property by falling on people, cars or buildings.
- Disjointed electric lines after strong winds and/or tornado would cause forest/bush fires and loss of life by falling on people, cars, buildings or forests.
- There might be power blackouts as a result of disconnected electric lines after strong winds and/or tornado.
- The storm surges after strong winds and/or tornado; might cause floods on shores and it causes over salinization in the rivers disembogue into the sea.
- Flying dust during strong winds might cause damage by getting into buildings and machines.
- Strong winds in winter would cause hypothermia, frost bite and other air sicknesses on the creatures as a result of wind colds and similar effects.

Work Accident/Safety

- Work accidents in your department should be defined.
- The most insecure places or the areas where there are common work accidents should be detected.
- It should be investigated whether it is possible to prevent the accidents by keeping hazardous materials in safer places or not.
- It should be checked whether the danger of sliding down on the wet floors or the floors that get wet while cleaning is paid attention or not.
- The evaluation of controllability of the accidents should be done as well.
- It should be searched whether the mitigation precautions to minimize the hazard factor on people and properties will be taken or not.

Snow /Rain Storms

- Heavy snow and rain would cause several structural damages by increasing the number of traffic accidents.
- Especially in sloping areas evaluation of an avalanche risk and prevention from it are very important.
- Roof fly or roof blow are possible against snow and wind load.

Drought and Heat wave:

Drought and/or heat wave are natural disasters affecting people and all other creatures.

- Forests and other inflammable materials have high possibility to catch fire at times like these.
- Planning/limiting of physical activities of students and personnel should be paid attention in prevailing heat waves.
- As well as hot and damp air make us feel air hotter and suffocate us, it causes a rise in allergic reactions due to multiplying of mold and water mold in buildings and furnishing.
- Carpets, oil painting and books are influenced from high damp in a negative way in such days. High damp causes molding on papers appearing in the form of small brown spots.
- In paintings, canvas hangs down by expanding from the wooden frame of a picture.
- In a similar way, most of the antiques, collections, artistic productions are influenced negatively from high and rapidly changing humidity content.
- Relative humidity (for example, such as mold bringing substantial harm on wooden parts, paint, wallpapers, carpets and clothing) should be kept under %60 in order to reduce microbiological problems.
- The need of air conditioning of electronic equipments like computers should be taken into consideration during heat waves.
- When the heat wave alarm given, suitable work surrounding for old and sensitive personnel should be provided and it should be cautious about first aid.
- In times of prevailing drought conditions, water in ponds and water tanks should be economised and the hygiene and garden services in facilities should be given particular importance.
- Additionally during suffocating air, there can be a rise in work accidents with the rise of carelessness.

Occupational Illness:
occupational illnesses and health risks - If there is any- (arising from chemical, physical, biological, ergonomic, etc. factors) peculiar to your department should be identified. Chemical factors causing occupational diseases are gases, vapour, smoke, haze and dust particles; and the physical factors are sound, tremble, heat, cold radiation, mechanic and electrical dangers. Ergonomic factors are badly designed chairs, repetitive movements, insufficient lighting etc.

Nuclear Radiation:
Even if Turkey does not have a nuclear power station, it is always under the risk of radioactive contamination due to a probable accident in nuclear power stations deployed close and far surrounding. In other words, radioactive contaminants released into atmosphere around Turkey can be carried even the inner parts of our country with the movements of air parcels.

- We should be careful about the equipments containing radioactive materials used in junky types or in other fields.
- Radiation arising from computers, base stations, lightning conductors and such things should be minimized as much as possible.
- Nearness to dumping sites where hazardous materials are stored should be taken into consideration as a potential danger.

Forest/Bush Fires:
Forest/bush fires threaten life safety of people and animals together with buildings and natural resources. Forest/bush fires can occur in any time of a year, but it is seen frequently in hot and dry air. The factors mentioned below should be taken into consideration in order to protect buildings against forest/bush fires in forest/bush lands.

- Controlled or intentional fires made in forests in hot and dry days.
- Burning of broken glass pieces in forests as a magnifying glass.
- Scattering of sparks from the chimneys of buildings in dry and hot days in forest/bush areas.
- Fires by energy transmission lines in strong windy days.
- Fires as a result of burning stubble in dry and hot days.
- Erosion danger arising in the area after a forest fire.
- Having been stored the materials like straw and wood shavings in or next to our building.
- To have too much trees, bushes and grass next to buildings.
- If heavy rainfall occurs immediately after a forest fire, landslide, mudflow and floods can occur easily.

Epidemics
- The risk of formation and extension such epidemics as meningitis, cholera, malaria etc.
- The risk of mold, insect and mouse invasion that can cause the spreading of epidemics.

Flood/Flash Flood:
Floods can occur in everywhere, every time and in many ways. Floods bring damages on buildings and private properties in some extent and also they can significantly damage electric, gas and water lines together with intercommunication systems. Erosion and deforestation occur as a result of floods too.

- Building barrages and holes and keeping people and some materials away from floods would enable to control floods.
- There is almost no time for an alarm during flash floods.
- Entering into floodwater with cars or being carried away of cars by floodwater, entering of people into floodwater intentionally should be prevented.
- Immovable machines should be protected with grease oil against floodwater.

It should be paid attention to keep the electric installation of buildings high in gulleys and to have check-valve in the sewage installation of buildings in gulleys.

- People should be informed about what to do before, during and after a flood and the staff should be trained.
- If there is a flood risk for your building, sand bags should be prepared to be protected from floods and escape plans about floods should be developed as well.

Terrorist Attack and Activities:

Terrorist activities can cause injuries, loss of life and damages together with hindering electric, gas and water services, communication, transportation and works. Terrorism can be in such types as organizational, international, firearms, explosives, pipe, blast and fire bombs, chemical, nuclear, biological materials etc.

- Do you accept suspicious packages or do you see them around?
- Do you leave the things like your luggage, bag, packet, box etc. together with your open food and drinks ownerless?
- Are entrances and exits checked in your department?
- Have you clarified necessary procedures and phone numbers to inform administrative officers and/or safety forces about any terrorist attack or similar activities?
- Have you defined evacuation roads, hiding and meeting places to prevent any self-harm of personnel by getting into panic?

Landslide:

Landslides occur as a result of sliding down of rocks, earth or other mountain parts from the slopes. Earthquakes, volcanic eruptions, ocean waves caused by storms or another landslide can cause these landslips. At the same time, landslides can be triggered by freezing-melting cycle of earth and expansion-shrink cycle, splitting of tree roots into earth like a dagger, digging of earth by animals, natural erosion or accumulation. More than 1/3 of landslides occur in relation with heavy rainfall or snow melt. Landslides can cause big damages on electric, water, gas, sewage systems, highways and railroads together with buildings.

- Landslides and mudflow are disasters that should be taken into consideration by settlements/buildings in low areas together with sloping lands. Whether our department is located on a sloping land or a low area should be determined.
- There are peculiar signs of landslides in buildings and lands. Whether there are fractures in slopes where our department is located or not, should be determined too. Whether there is a bending at trees, fences, retaining walls, pillars or walls in slopes should be determined. And also any bending, sinking, falling or heaving in slopes should be examined.
- Whether doors and windows get jammed, new fractures are formed on plastering, garden walls and exterior stairs etc. parted away from buildings or not should be checked.

Fires:
The questions mentioned below should be taken into consideration.

- What are the fire possibilities that can occur accidentally or with sabotage?
- Do electrical fuses frequently blow due to overloading in your department?
- Are there any electric cables passing under carpets and over nails, heaters and hot pipes in your department?
- Are burned cables and plugs used in your department?
- Is an electric heater used in your department?
- Are extension cables used in your department and more than one electrical appliances plugged into them?
- Are all the electrical materials with TSE (Turkish Standards Institution) branded in your department?
- Are old carpets, papers, pieces of furnishing and other inflammable materials stored in yourbuilding?
- Are there any clothing, curtain, carpet or paper on electrical appliances, gas stoves or inflammable materials?
- Are there any cut dry grass and tree parts or are they stored?
- Are there trees or bushes next to your building? Are outer walls of your building covered with grass?
- Are the people smoking in prohibited areas in your department?
- Are timberworks and decorations of your department painted with fire-resilient paint?
- Have fire- resilient materials been used in fire hazard areas?
- Are inflammable materials stored in fire- resilient parts in your department?
- Are electrical appliances closeable in places working with flammable liquid or gas?
- Is there any smoke detector? If there is, are they checked or tested periodically?
- Do you have a fire blanket?
- Do you have fire extinguisher tubes in A-B-C type? If you have, are they checked or tested periodically?
- Are maintenance and control of fire extinguisher tubes carried out periodically?
- Is installation maintenance carried out periodically in order to prevent fires arising from electric contact?
- Are chimneys of your building periodically cleaned by qualified individuals?
- Have you practised all the requirements of fire codes?
- Is there any possibility for inflammable and caustic materials to mix each other?
- Are escape ways and fire exits directed with exit boards that are supported by an uninterruptable power supply for an easy and quick evacuation during a fire?
- Are escape ways and fire escapes cleansed from every kind of obstacles?
- Are the front parts of fire precaution and extinguishing devices and systems closed and have their places been relocated?

Lightning:
Lightnings do not only cause fires and major damages on communication and electronic devices in your department and surrounding but also they can cause deaths directly.

- Is your building under the risk of a lightning? In other words, has a lightning struck your building or around it? Is your building high and on a hill? And do they have long protrusions such as a tower or a chimney? Are there long trees next to our building?
- Are buildings protected against the risk of a lightning with a lightning conductor?

Appendix -5. An Example for the forms Indented for Defining Hazard Profile

...School **Hazard Profile Form No: ...**
HAZARD: Earthquake/ (Personnel)
INFLUENCE SEVERITY: • **Disaster: It can affect more than %50 of people and/or environment or service/production 30 days or more.** • **Critical:** It can affect between %25 and %50 of people and/or environment or service/production at least 2 weeks. • **Limited:** It can affect between %10 and %25 of people and or environment or service/production for 1 week or more. • **Unimportant:** It can affect less than %10 of people and/or environment or service/production for 24 hours or shorter.
OCCURANCE FREQUENCY/ PROBABILITY : • **High:** The probability to be seen is %100 or close to it. • **Sometimes:** The probability to be seen is between %10-100 or at least one time in next 10 years. • **Seldom:** The probability to be seen is between %1-10 or at least one time in next 100 years. • **Absent:** (Hardly ever) The probability to be seen is less than %1 in next 100 years.
AREAS OR ENVIRONMENTS AFFECTED MOSTLY: Storage porch, tube stocks, stocking tanks, pipe lines, offices, cupboards, shelves.(The whole of the facility)
TOTAL NUMBER OF PEOPLE THAT IT CAN AFFECT: All the personnel of facility
TIME AND PERIOD IN WHICH IT IS EFFECTIVE: Maximum 1 minute
APPROXIMATE OCCURENCE AND WARNING TIME: • It occurs more than 24 hours and early warning can /cannot be done. • It occurs between 12 and 24 hours and early warning can /cannot be done. • It occurs between 6 and 12 and early warning can/cannot be done. • It occurs shorter than 6 hours and early warning can/cannot be done. • It occurs suddenly and early warning can/cannot be done.
AN EARLY WARNING SYSTEM OR METHOD -IF THERE IS:
APPROXIMATE TIME FOR EVACUATION: 1- 5 minute
YOUR PREPARATIONS AND/OR SUGGESTIONS FOR THIS DANGER: **Earthquake button**

Appendix -6. Examples for the Degree of Influence in Different Categories.

Category	A	B	C	D
Influence type	**Disaster**	**Critical**	**Limited**	**Unimportant**
Personnel	Death or injury	Permanent disability, serious injuries or becoming ill	Illnesses or injuries that do not prevent any disability or vital activities	They can be treated with first aid.
Folk	Death as a result of direct expose	Permanent disability, serious injuries or becoming ill	Illnesses or injuries that do not prevent any disability or vital activities	Very small damages
Surrounding	An uncontrolled major chemical oscillation, the destruction of biological life in regional or total space	An uncontrollable minor chemical oscillation, being damaged of local biological life.	A major chemical oscillation under control, being partially influenced of local organisms in a negative way.	A minor chemical oscillation under control and its damage on surrounding is in an irresolvable level
Economic	Financially, the loss of savings completely, not to be able to provide required funds before one week for an emergency rescue and organization by community.	Financially, the loss of savings partially, not to be able to provide required funds before 4 days for an emergency rescue and organization by community.	Financially, the loss of a small part of savings not to be able to provide required funds before 24 hours for an emergency rescue and organization by community.	Minor losses, not to be able to find the required funds before 12 hours for an emergency rescue and organization by community.
Institution	Closing of schools completely and not to be provided by critical services before one month.	Closing of schools completely and not to be provided by critical services before 2 weeks.	Closing of schools completely and not to be provided by critical services before one week.	Closing of schools completely and not to be provided by critical services before 24 hours.
Financial possibilities	Being damaged seriously of more than 50% of financial possibilities near disaster areas.	Being damaged seriously of more than 25% of financial possibilities near disaster areas.	Being damaged seriously of more than 10% of financial possibilities near disaster areas.	Being damaged seriously of not more than 1% of financial possibilities near disaster areas.

Appendix-7. Defining the Priorities According to the Results of Risk Analysis

....SCHOOL LISTING FORM ACCORDING TO THE RISKS OF HAZARDS No:.....

HAZARD	**Frequency of hazard**	**Effects on personnel**	Importance degree for personnel	**Effects on the place / product**	Importance degree for place/product	**Effects on production/ service**	Importance degree for business continuity	**Including level in the plan**
	0= Absent 1= Seldom 2= Sometimes 3=High	0=Unimportant 1=Limited 2=Critic 3=Disaster	0=Unimportant 3=3. Level 2=2. Level 1=1. Level	0=Unimportant 1=Limited 2=Critic 3=Disaster	0=Unimportant 3=3. Level 2=2. Level 1=1. Level	**0=**Unimportant 1=Limited 2=Critic 3=Disaster	0=Unimportant 3=3.Level 2=2. Level 1=1. Level	0=Absent 1=Limited 2=Partially 3=Absolute
Gas leakage	2	3	2	1	3	**1**	3	3
Explosion	1	3	3	3	3	**3**	3	3
Fire	1	3	3	3	3	**3**	3	3
Electrostatic / Lightning	1	3	3	3	3	**3**	3	2
Earthquake	**2**	**3**	3	**3**	2	**3**	3	**2**
Sabotage	**1**	**2**	3	**3**	3	**2**	3	**1**
Severe weather conditions	**2**	**1**	3	**1**	3	**1**	3	**1**

Appendix- 8. An Example for Hazard Hunt Form for Classes and Offices

Name of The Building:…… Room Number:…… Date:…../…../20……

Earthquake	Y	N	UN	NA
Is there any fire cabinet close?				
Has the fire cabinet been designed in such a way that it is opened easily and it may not be damaged during a tremor?				
Has it been prominently marked where the first aid materials such as a fire cabinet, fire extinguisher tube etc are?				
Have emergency exits been prominently marked? (These signs should be seen during an emergency case (smoke and darkness)).				
Have unfixed objects such as a cupboard, bookcase and shelves been rendered free of hazard with any structural support?				
Have some precautions been taken to prevent any injuries caused by falling of objects in a cupboard, bookcase and on shelves?				
Have heavy objects been kept away from high shelves?				
Have some precautions been taken to prevent any injuries caused by breaking of office windows during a probable shake or an explosion?				
Are aquariums and other potentially critical objects away from the places we sit?				
Are wall-mounted/hanging clocks, maps, fire extinguishers protected against any falling?				
Are flower pots in an in a position that might not fall or break the windows during an earthquake?				
Are objects around doors in a position that might not affect entrances and exits by falling?				
Have paper and other easily inflammable materials stored close to electric and flame heaters been taken away?				
Does television monitor stay on a safe platform/cabinet without causing any danger?				
Have computers, monitors, printers and other valuable office materials been fastened in such a way that they may not fall during a shake?				
Do portable/movable cabinets carrying electronic equipments and computers have fixable wheels?				
Have the container carrying any kind of chemical materials been protected against any falling?				
Have hanging electric equipments (lamps, projectors etc.) been protected against falling during any tremor?				
Have some precautions been taken about ceiling floors, ventilation ducts and chimneys against any injuries caused by falling during a tremor?				
Have tubes containing hazardous gas and inflammable materials been positioned not to fall during tremors?				
Have water and heater pipes been strengthened against tremors?				
Are compartments, inside offices durable against tremors?				

Sign Boards	Y	N	UK	NA
Do pictograms contain bare and basic details?				
Are they suitable to the surrounding they are used?				
Are they made of impact and weather resilient materials?				
Can they be seen easily and are they understandable?				
Are they suitable in height and position for eyesight?				
Have they been put near dangerous places and next to dangerous objects and the entrance of general dangerous places?				
Have fluorescent colours, reflector materials or artificial lightings been used in places where natural lights are weak?				
Has the sign board been taken away after the circumstance shown in it has disappeared?				
Emergency Exits and Doors	Y	N	UK	NA
Are emergency exits and doors directly opened outside or to a safe area?				
Have objects that might prevent evacuation in front of emergency exit doors been taken away?				
Are number of emergency exits and doors, their sizes and places suitable to the size of a school and the number of the staff there?				
Are emergency exit doors opened to outside?				
Are rail or revolving doors used as emergency exits?				
Can emergency doors be easily and immediately opened by personnel during an emergency?				
Have emergency exits and doors been properly marked? (Sings should be put in suitable places and should be permanent)				
Are emergency exit doors locked or bonded?				
Are there any extra lighting systems at emergency exits and doors that might enable adequate illumination during any electricity cut?				
Doors and Exits	Y	N	UK	NA
Are the places of doors and exits, their number and size and materials they are made of suitable for the rooms, places and their intended use and also are they appropriate for the entrance and exit of the personnel?				
Have outer surface of transparent doors been prominently marked?				
Have opening at both sides doors been made of transparent materials or do they have transparent parts that make opposite sides to be seen?				
Have outer surfaces of transparent and semitransparent doors been protected against any break?				
Do rail doors have security system to prevent from going off trails and turn over?				
Do opening upwards doors have security system to prevent from falling down?				
Have doors on escape roads been properly marked? (These doors should be opened without getting help.)				
Do mechanical doors have noticeable and accessible emergency shutdown devices?				
Can mechanical doors be opened by hand in case of they may				

Fixed ladder, Stairs, Stoop	Y	N	UK	NA
Are the stair surfaces not slippery and made from the proper material?	☐	☐	☐	☐
Are there anti skid bands on the stairs to prevent slipping?	☐	☐	☐	☐
Are the banisters' heights enough and safe?	☐	☐	☐	☐
Are the materials and obstacles that hinder passing put away?	☐	☐	☐	☐
Are the heights of stairs suitable? Do the stair elevations comply with standards?	☐	☐	☐	☐
Are the ladders and stoops lighted? Is there extra energy in case of an emergency?	☐	☐	☐	☐
Are the manual buttons of lights in enough distance?	☐	☐	☐	☐
Fire Precautions	☐	☐	☐	☐
Are there enough fire fighting equipment, fire detector and alarm system in the school?	☐	☐	☐	☐
Is the fire fighting equipment easy to use?	☐	☐	☐	☐
Is there any obstacle in front of the fire fighting equipment?	☐	☐	☐	☐
Is the fire fighting equipment put in visible and accessible places?	☐	☐	☐	☐
Are the validity date and periodic filling dates proper?	☐	☐	☐	☐
Are there fire instructions in accessible places?	☐	☐	☐	☐
Are there trained and authorized people about fire?	☐	☐	☐	☐
Are the inflammable materials under guard?	☐	☐	☐	☐
Are there unnecessary materials, paper/crap that can cause fire?	☐	☐	☐	☐
Is there an alarm system which is working and checked regularly?	☐	☐	☐	☐
Is the place of fire fighting equipment marked properly and are the marks permanent in proper places?	☐	☐	☐	☐
First-aid Room and Equipments	☐	☐	☐	☐
Is there a first-aid room?	☐	☐	☐	☐
Are the first-aid rooms equipped with adequate materials and equipments?	☐	☐	☐	☐
Are these places marked according to the Safety and Health Signs Regulations?	☐	☐	☐	☐
Are there first-aid equipments in the necessary places according to the working conditions and are they marked properly?	☐	☐	☐	☐

Y: Yes N: No UK: Unknown NA: Not applicable

This form is filled by _____

Appendix- 9. Examples for the Signs Used in the Plans

Fire extinguisher	
Fire hose	
Fire extinguisher and other devices	
Flammable chemicals	
Explosive chemicals	
Nuclear radiation danger	
Gas tubes	
Chemicals' storage	
Laboratory	
Beam box	
Wood, paper and other flammable materials	
Shower	
Location of chemical wastes	
Exit	

Appendix- 10. An Example for Hazard Mitigation Plan

Building name: _____ Room No: _____ Date: ___/___/20__

You are expected to fill all the details which are marked as "No" in **HAZARD HUNT** forms. Furthermore add non-structural hazards to this form which are not mentioned in **HAZARD HUNT** forms but important for the related establishment, building and office.

Hazard:	**Necessary Precautions:**	**Urgency (1-4)***

4: Very Urgent, 3: Urgent, 2: necessary to do, 1: better to do

This form is filled by _____

Appendix- 11. An Example for Information Cards

NAME OF THE MATERIAL		SULPHURIC ACID
CHEMICAL FORMULA		H_2SO_4
CHEMICAL AND PHYSICAL PROPERTIES	**MOLECULAR WEIGHT**	98 gr./ mol
	DENSITY	1.84 gr./cm^2
	APPEARANCE	colourless, bright, liquid
	H_2S_4 (W/W) MAX.	98,5%

SPECIFICATIONS:			
	APPROPRIATE TO TSE 692	TECHNIQUE	PURE ACID
Ash	%: Max. 0,15"	Max. 0,02	Max. 0,002
H2SO4	%: Min.60	Min. 92,5	Min. 98,5
Fe	%: Max 0,035	Max. 0,005	Max. 0,002
As	%: Max. 0,04	Max. 0,001	Max. 0,00005
Pb	%: Max. 0,05	Max. 0,002	Max. 0,002
Nitric oxides	%: Max. 0,001	Max. 0,001	Max. 0,0002
SO2	%: -	Max. 0,02	Max. 0,001
Cl	%: -	Max. 0,001	Max. 0,0005

PROBABLE HAZARDS	Human and environment corrosive. When it contacts with organic substances, it breaks them into pieces and carbonizes them because of its high water hammer property. If it touches to skin and living tissues it causes severe burns. It causes severe irritation in the eyes.
FIRST AID	* Take off the clothes which are contaminated with sulphuric acid immediately. * Take a shower immediately. * If acid contacts with skin, wash it with plenty of water. Wrap the skin with sterile bandage and go to a doctor. * If acid is swallowed, drink plenty of water. Do not vomit, go to a doctor. * If it contacts with eyes: keep the eyelids open and wash them for 15 minutes ceaselessly. Go to a doctor.
SAFE TRANSPORT AND STORAGE	* Tankers and depots in which sulphuric acid is transported or kept must be very clean. * Draining and transferring acid must not be under pressure.

Appendix- 12. Fire- Scene CheckList

Name of the 1st responsible person Name of the 2nd responsible person

Record the information below as appropriate for the situation. Then tick the related boxes when you perform the actions.

Name of the building _____ Date _____

Incident scene (floor/room/department) _____Time _____

___ first witness of the accident left the accident scene and activated the nearest fire alarm or warned the responsible person and assured that the building was evacuated on time.

___For calling fire station (number 110 or the number given on page???)..... phone number was called at ..... by .....

Fire call should be like this: (Do not hang up until you get a confirmation as "understood" from the person on the phone.)

- (Give your name and title) I am calling to inform you about a fire.
- This is our address (give the name of the building and total floor number, mention what is burning, and give information about the flammable materials.) (read the address in a clear tone)
- Describe the accident scene and type of the fire. (electricity, chemical, tube, automobile etc.)
- The phone number I am calling from is (.....) ....
- When you come a person named ..... will meet you in ..... (describe the meeting place)
- Fire brigade truck can come from ..... (describe the most suitable roads)

___The census is taken in the accident scene. As the result of the census there are ..... people in the accident scene.

___There are missing people. Reason ..... From where.....

___The fire brigade is informed about missing people.

___The most responsible person of the building is informed about the fire by ..... at .....

The information about the accident which must be given to the authorized person:

- I called fire brigade for help (give your name - title and the name of the building and department along with the place and type of the accident). Fire brigade has come / has not come yet. Personnel and students have been evacuated / have not been evacuated. There are ..... missing people / there are not any missing people among students and personnel.

___The students and personnel are evacuated (if a car is used mention the license plate and the name of the place they were sent).

___The students and personnel turned back to their classes and working places at .....

The name and title of the person who wrote this report: .....

Appendix- 13. An Example for the Standard Operation Procedure

BOMB NOTIFICATION PHONE REPORT

Aim: In order to have information about probable sabotage and bomb notification and make an evaluation this form should be filled and one copy of it should be sent to police, security and gendarme units when it is necessary.

THE GENDER	AGE	ACCENT OF THE CALLER

VOICE OF THE CALLER

__calm
__angry
__excited
__husky
__fast
__soft
__high
__laughing
__crying
__normal
__clear
__familiar
__nasally
__stutterer
__lispily
__rude
__deep
__rough
__houghing
__taking deep breathes
__jar
__changing
__foreigner
__swallowing the words

If the voice is familiar whose voice can it be? .....

BACKGROUND VOICES

__street (car, bus)
__plane
__voices
__music
__house (plate, TV voices)
__motor (fan, air conditioner)
__office machines
__other.....
__animal voice
__clear
__silent
__local call
__distant call
__phone box
__factory machines

QUESTIONS TO ASK

1. When will the bomb explode?
.....
2. Where is the bomb right now?
.....
3. What does the bomb look like?
....
4. What kind of a bomb is it?
.....
5. What causes the bomb's explosion?
.....
6. Did you place the bomb?
.....
7. Why did you place a bomb?
....
8. Where are you?
.....
9. What is your name?
.....

WHAT IS SAID EXACTLY?

.....
.....
.....
.....
.....

THE PERSON WHO RECEIVED THE NOTIFICATION:
NAME: .....
POSITION: .....
PHONE NUMBER: .....
DATE: .....

THE PEOPLE WHO ARE GOING TO BE CALLED IN EMERGENCY (THE PEOPLE MENTIONED IN THE PHONE)

Appendix-14. School Emergency Report

School: _____

The name and the number of the building: _____

Floor(s): _____

Who filled the form: _____

His/her: _____

Location: _____

Phone number: _____

URGENT NEEDS: for example; rescue, fixing the water pipes when there is a risk of flood.

Explanation: _____

Personnel situation:

The number of the existing or counted personnel: _____

Missing people: _____

The number of people who need medical support: _____

The situation of the wounded ones: seriously:_____ slightly:_____

Is there anyone stuck?

In the building Yes__ No__ Where_____

In the elevator Yes__ No__ Where_____

The situation of the building

Fires (if yes get alarmed) Yes__ No__

Structural

Heavy damage (some part or a floor of the building fell down) _____

Moderate damage (furniture and light source fell down) _____

Light damage (there are small wall cracks, some books fell down)

Energy sources

Electricity On___ Off___

Water On___ Off___

Gas On___ Off___

Communication

Phones On___ Off___

Computers On___ Off___

Hazardous materials

Hazardous substance spills Yes___ No___ Floor(s)____

Biohazards Yes___ No___ Floor(s)____

Dispersion of radiation Yes___ No___ Floor(s)____

Asbestos hazard _____ Other_____

Observations / Necessities: _____

_____

_____

GLOSSARY

Emergency: the bad effects of a small hazard, which can be handled with local facilities, on life, property and environment. For instance, a house fire which can be extinguished by local fire department would be described as an "emergency".

Disaster: the situations which the local facilities are not enough in coping with the bad effects of a hazard on life, property, environment, economy and cultural values. Natural events like earthquakes, floods, thunderbolts which require nationwide or international support and cause great loss of life and property are named as natural disasters.

Heavy damage: occurring of big fractures on the walls and the falling of the chimneys.

Active fault: the fault which was active at least for once and caused an earthquake for the past 10.000 years.

Flame: the visible part of burning.

Alluviual: the unbalanced sediments as a result of the materials like clay, silt, sand and gravel which are gathered in certain regions.

Main shock: the earthquake which happens between a foreshock and an aftershock and which is more destructive than the others.

Aftershock: the earthquakes which happen after the main shock and have less magnitude than the main one.

Concrete reinforced: a construction material which is made up of concrete and steel reinforcement materials together.

Mudflow: the downward mass movement of waterlogged soil and rock materials as a result of heavy rain from the mountain slopes and valleys in arid and semi-arid areas.

Earthquake hazard: it includes everything about an earthquake that might be dangerous for human life.

Earthquake: the trembling and shakings that happen on earth with the movements of the earth's crust.

Seismicity: the distribution of the sequences and the magnitudes of earthquakes in a certain area.

Natural disaster: the disasters which are caused by some natural events like earthquakes, floods, avalanches and landslides, etc.

Infill wall: the components which are made up of hollow bricks in order to separate various places. They are not a part of the supporting system but have an important effect on the earthquake response of a construction.

Reinforcement: the steel constituent which helps the carrying process with concrete reinforcement in concrete components.

Energy: different energy types which can be turned into different forms but still

remain the same amount of total energy; the skill of doing.

Epicentre: the closest spot to the focal point on earth. This spot is also the place where an earthquake is felt strongest.

Stirrup: a horizontal reinforcement which is placed in gaps to prevent the disintegration of the concrete in concrete components by horizontally encompassing it.

Fault: the the breaks and moves that happen where the plates/weakness that form the crust.

Over ruin: the total destruction of the constructions.

Observation: measuring the physical activities like earthquakes, temperature, pressure or winds which happen on or above the surface of the Earth.

Light damage: cracking of plasters and removing of little plaster parts.

Balk: rectangular concrete components which are both produced in horizontal and vertical forms to enable the supporting walls act together in masonry buildings and to prevent weakness as a result of the spaces opened in the walls.

Landslide: movement of soil and/or rocks by sliding on a plane surface.

Hypothermia: reducing of the body temperature in a way that the normal muscle and brain functions would be damaged.

Hypocenter: the spot within earth where fault breaks and the energy of an earthquake occurs. Actually the focal point is not a point but a line/surface still it is accepted as a point in the applications.

Geophysics: it is the science which examines the physical properties and activities of earth.

Geology: the science which examines the structure and materials, historical development and the processes that shape the earth's crust.

Piled foundation: it is the type of foundation that is applied with the piles with high bearing capacity and extends to the stratum when there are tall building heights and very bad ground conditions.

Short column: the case in which some columns are shorter than the others in reinforced concrete buildings as a result of both architectural and structural applications and there is the effect of more force.

Girder: horizontal bearings produced in rectangular forms that combine the vertical bearings to each other in reinforced concrete buildings.

Column: vertical supporting components which have the similar size of plans in reinforced concrete buildings.

Corrosion: the loss of the characteristics of concrete components by rusting as a result of moisture and water.

Cure: the curing process of the removed plaster in order to regain its stability.

Magnitude: the amount of the energy that comes off during an earthquake. It is determined out from the records of the devices which record the earthquakes. Each earthquake has only one magnitude and it does not change according to the distance or other properties as in intensity.

Epicentre: the closest place to the focal point where an earthquake is felt strongest.

Focal depth: the shortest distance between the point where the energy of an earthquake comes off and the earth.

Focal point: the place where an earthquake happens under the ground.

Moderate damage: happening of little cracks on the walls, falling of big plaster pieces, slipping of bricks, little cracks on the chimneys and falling down of some parts of chimneys.

Foreshock: small shakings after the main shock. An earthquake is named as a foreshock on the condition that a larger earthquake happens in this area.

P-wave: it is the first wave that directly comes from the epicentre and arrives to the earthquake area in large earthquakes.

Partition: vertical bearing components whose ratio is seven in plan size in reinforced concrete buildings.

Raft foundation: the foundation type which is applied with a certain thickness when the constructions are higher and the ground conditions are not good enough.

Richter scale: the magnitude scale of the earth. It is the numerical scale of the energy released after an earthquake. Richter scales are used in order to measure the real size of earthquakes. This is called as "earthquake magnitude". The magnitude corresponds to an increase

of 30 times the amount of energy in each numbers. So there is 30 times energy difference between the earthquakes with 6.0 magnitudes and 7.0 magnitudes.

Risk: negative results caused by hazard. These results affect directly or indirectly life, houses, working places and their activities. Risks cannot be eliminated totally but it can be reduced. It is expresed as Risk = Hazard x Vulnerability

S-wave: second wave that comes after P wave during an earthquake. It is a seismic wave that shake earth surface up and down as vertical to direction movement.

Liquefaction: due to effect of an earthquake, complete loss off the bearing capacity as a result of increasing space water pressure and acting as a liquid of water logged, fine grained sand and silty layers.

Seismic gap: one part of fault that has caused an earthquake in the past but seismically inactive now.

Seismograph: it is a device that detects and records seismic waves. An inactive stable mass is detected as the other part moves during an earthquake in most of seismographs. Some seismographs detect vertical movements as some detect horizontal ones. Marks of waves are drawn on a mobile paper band with a vibratory pen. Arrival time is calculated between P and S waves. Time on a "seismograph" gives the distance between station and epicentre.

Seismography: the branch of science which examines how the earthquakes happen, how the seismic waves are transmitted in the earth, measuring devices and methods, evaluation of the records and other subjects related to earthquakes.

Seismology: the subdiscipline of geology which examines the formation of earthquakes, transmission of seismic waves, measuring and other subjects related to earthquakes.

Intensity scale: the scale that evaluates the intensity of an earthquake. In other words, intensity scales measure the reactions of animate and inanimate beings that are affected by an earthquake. When an earthquake occurs its effect on the area can be described by its severity. And the intensity of this earthquake is measured according to the intensity degree that the earthquake belongs based on the observations.

Intensity: it is the size of effect of an earthquake that occurs in any depth and felt on the earth. It depends on effects on physical structures and people. It based on observational data and standard scale prepared beforehand.

Evacuation: especially leaving and getting out away from area under threat.

Bearing component: a vertical or horizontal component that carries the vertical and horizontal forces that are effective on a construction.

Bearing system: the system as a combination of supporting components with the aim of carrying the external loads safely in a construction.

Hazard: events like earthquakes, floods, hurricanes, landslides, fires, explosions which might cause loss of life and property and restricts our daily lives.

Foundation: the bearing system that supports the building and enables the external loads to be passed to the foundation safely.

Triage: a coding and selection process of prioritizing patients and injured based on the severity of their condition in a phenomenon zone by healthcare organizations.

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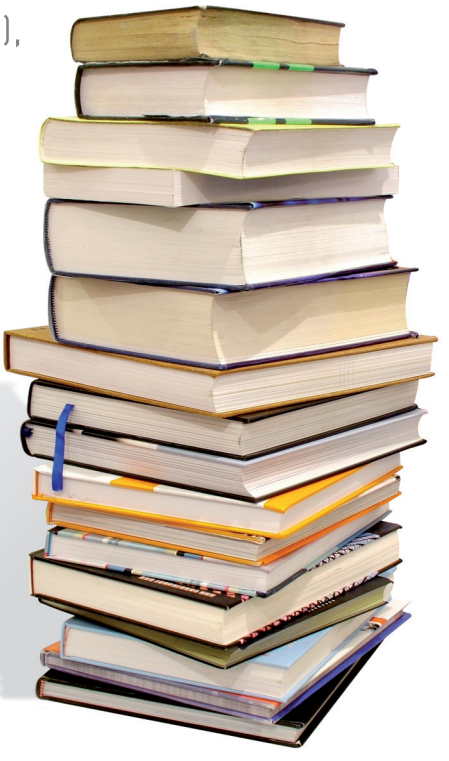

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Notes


Notes

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