

NEEDS REPORT (BULGARIA)

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1. Aims of the analyses

This study aims to identify the current situation, the risks, the practices and methodologies existing so far in Bulgaria related with the objectives of the project.

2. Methodology of the analyses

The presented needs' report related to the earthquakes information and dealing with children's emotions invoked by these disasters is based on methodology – **identification, research, structural and comparative analyses, gathering and generalization of data, etc.** – in relation to the following main sources (resp. fulfilled objectives):

- ✓ Meetings with national experts
- ✓ Identification of EQ risk for Bulgaria
- ✓ National policy of education related to earthquakes
- ✓ Questionnaires for pupils and for adults
- ✓ Interviews with national experts
- ✓ Good & Bad Practices

3. Main activities – sources of analyses for the realisation of Needs report

The mentioned above main activities realized under the project form the content of the following report.

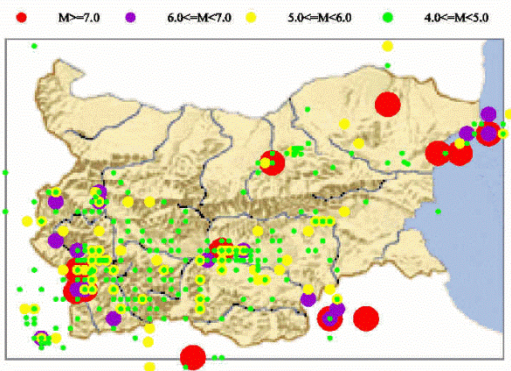
3.1. Identification of EQ risk for Bulgaria (brief presentation)

In the form of *Introduction* to the following report the EQ risk for Bulgaria will briefly be presented.

The earthquake zone of the Balkans has its own specific. The bigger part of the earthquakes are shallow with earthquake focus of 60km in the earth crust, which intensifies the effects on the surface. When population density is high, and the number of buildings is as well, there is a threat of significant consequences even when the earthquake is relatively weak.

- **Seismicity of Bulgaria**

The seismic activity in Bulgaria is high – 97 of 100% of its territory is under earthquake threat.



Magnitude 7.0 and higher!¹

- South-West Bulgaria
- Central South Bulgaria
- Central North Bulgaria
- North-East Bulgaria (in the sea)
- Central North-East Bulgaria (the magnitude is controversial)

- **Brief historical account of the seismic activity in Bulgaria**

The first written accounts of earthquakes in Bulgaria are in the 1 century A.D. According to ancient authors such as Strabon, Pomponii Mela and Plinii, an earthquake has ruptured the plateau of Chirakman and has buried in Black sea the ancient town of Bizone (near Kavarna).

Big earthquakes have occurred in I, IX, XVI, XVII, XVIII and in the beginning of the XX century..

The event on **4 April 1818** has to be noted with $I_0=8-9$ MSK and $M \approx 6.0$. It happened near Sofia. The hardest documented earthquake in Sofia and its surroundings is the one on **30 September 1858** c $M=6.0-6.5$, and $I_0=9-10$

¹If nothing else is indicated, the data (graphics, etc.) belongs to the Geophysical Institute towards Bulgarian Academy of Science.

MSK, which destroys a big part of the city. The number of buildings destroyed and casualties is unknown (there is only partial data)

In the beginning of the XX century on the territory of Bulgaria there are a number of disastrous earthquakes. Only for the first 3 decades there have been 11 earthquakes with magnitude over 6.

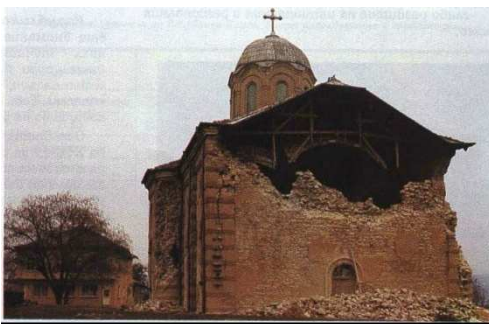


1904 in the South-West Bulgaria (near v. Kroupnik and v. Kresna) an earthquake occurs with the magnitude of $M=7.8$ and epicentre intensity $Io=10-11$ MSK. This is the worst and most famous earthquake in Bulgaria and one of Europe's hardest shallow earthquakes. It is forerun (25 minutes earlier) by and another hard shake-up with magnitude of 7.1-7.3. Heavily damaged are Kroupnik, Brejzane, Simitly, Kresna and many other villages. It was felt on 1 400 000 km² of the surface.

1913 near the town Gorna Oriahovica and earthquake occurs with magnitude of $M=7.0$ and epicenter intensity macro-seismic of $Io=9-10$ MSK. The villages Gorna Oriahovica (95%), Veliko Tarnovo, Liaskovec and Dolna Oriahovica – up to 80% - are destroyed. Other places are also seriously damaged. Сериозно засегнати са и много други места. The earthquake was felt on 400 000 km² of the surface.



1928 year 3 catastrophic earthquakes strike in Marica river's valley, the second one being the hardest – 7.0 and $Io=9-10$ MSK. These events cause serious destruction in the towns of Plovdiv, Chirpan and Parvomai. 74 000 buildings are completely demolished, 150 are killed and there are more than 1000 wounded. As a result, 2 cracks are formed on the surface, each one tens of kilometers long. The territory the earthquakes is felt on are respectively 470 000 km², 500 000 km² and 195 000 km². This marks the beginning of the earthquake insurance in the country.

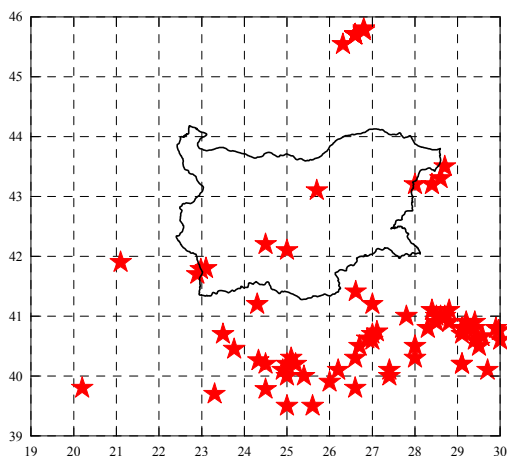


After this year there have not been any other so catastrophic earthquakes in Bulgaria. The hardest one is the second of the pair of earthquakes in 1986, with magnitudes of 5.3 (February, $Io=7-8$) and 5.7 (December, $Io=8$), near the town of Strazhica. It is devastating for Strazhica, Asenovo and Markovo – near 80% of damages. The second earthquake multiplies the effects of the first one and leads to serious damages, including in

² see: Приложение №7 - Най-силните земетресения, засегнали България през XX и XXI век

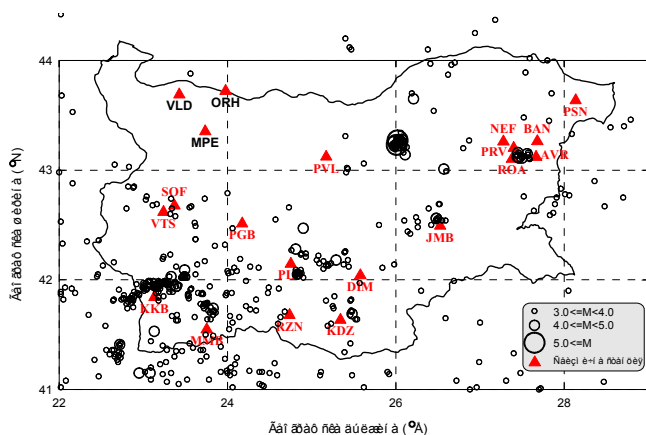
more recent and massive buildings. Partly or fully demolished are 15 000 buildings, casualties - 2 people, wounded 60. The earthquake was felt on 180 000 km².

Documented earthquakes with magnitude 7.0 and higher



- Development of preventive seismology in Bulgaria

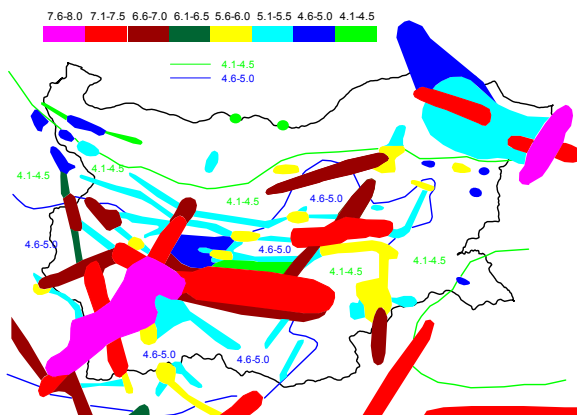
The beginning of the Bulgarian seismology is the year of **1892** when Spas Vacov, director of the Central Meteorological Station in Sofia, organizes a corresponding web for monitoring and description of the earthquakes in Bulgaria. The first seismograph is installed in Sofia in 1905. During 1970-1980 there are 7 working seismological stations. The modern Bulgarian seismological web, NOTSSI³, is launched in action in 1980. In 2005 the web is further modernized and currently it is spread among 14 permanent digital stations, 2 local webs and *Center for gathering data and data analyses*, located in Sofia. The data is submitted in real time since 1980.



³ National Operative Telemetric System for Seismic Information

- Earthquake danger in Bulgaria⁴

Map of possible seismic focus in Bulgaria (PSF)



„As a whole, 98 % of the territory of Bulgaria will be subjected to seismic impact with intensity of 7th and higher degree. 51% will be of 7th degree, 28% - of 8th degree, and 19% - with 9th degree or higher. 6 340 000 people, which is about 80% of the country’s population, live in these areas. The damages in the regions could be partial or full – 26% of the buildings. In areas where the intensity could get 8th or 9th degree on the scale of MSK-64 live around 5 900 000 душу, which is 74% of the country’s population.”⁵

Seismic zoning in Bulgaria



⁴ The data is from the Geophysical institute of BAN.

⁵ Analyses of the seismic risk in: National program for protection from natural disasters (209-2013), passed by the Government of Bulgaria, 2009, p. <http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=550>

Distribution of area in% of the territory of Bulgaria with different seismic level

Map type	Seismic degree on MSK degree				
	VI	VII	VIII	IX	≥VII
distribution of earthquakes 100	35	65	-	-	65
distribution of earthquakes 1000	2	51	28	19	98
distribution of earthquakes 10 000	0	22	44	34	100
Regulations 1961 – 1964	78	17	4	1	22
Regulations - corrected map from 1977	60	34	5	1	40
Maximum observed levels of intensity	36	49	11	4	64

Seismological researches prove beyond any doubt **the real earthquake treat in Bulgaria**. The science gives warning about the danger and evaluates the consequences of it. The earthquakes in the beginning of the 20th century are already forgotten and people live in perception of safety. Experience of past quakes here and around the world shows that regrettably the society takes measures post-factum, after the disaster happens.

3.2. National policy in relation to earthquake related education

Before starting the analyses of specific activities/products, we have to turn our attention to the normative base giving the parameters of the earthquake related education. First off, we have to point out that it is part of the whole natural disasters protection problem.

There are two main documents here. The first one is The Law for disasters protection (passed in 2006; last change in State gazette, issue №39, May 2011.)⁶. Article 16 of the law says:

Training for protection during disasters and giving first aid is being carried out in the national education system and in the higher education schools.

(2) Basic knowledge of the risks of disasters and ways to behave and act are being taught during primary school, and during secondary school and higher education – knowledge of protection relative to the profile and the specialty of the education

(3) (...) The Secretary of Education, Youth and Culture after coordination with the Secretary of Internal affairs has implemented programs for training, educational materials and manuals for kindergartens and schools and plans for training and preparation for disasters of the leading personnel and the teachers in the system of national education.

⁶ <http://lex.bg/laws/ldoc/2135540282>

The second document is The National Program for disaster protection (2009-2013)⁷, where in section IV.3. the accents related to “Disaster protection education in the national education system” are described. We will mark a few important moments:

- The education will be carried out in a few forms: class system (in a special weekly period dedicated to the class), after class and extracurricular
- The education model has to be based on modern methods using interactive forms, methods and means.
- Insuring and expanding the possibilities for education of people with disabilities and chronic diseases.

A) Education in kindergartens

The disaster protection training is carried out (according to a normative document issued by the Ministry of Education, Youth and Culture in 2004⁸) in the 3rd and the preparatory group. Annex 2 to this document is *Program for preparation for action during disasters, accidents, emergencies and fires for children under school age from national, regional, private and foreign kindergartens*. Here the earthquake related subject is formed as “*Earthquake – behavioral rules*” (III Group). However, it is not a separate subject, but rather a part of another subject – “*Familiarizing with the work of specialists protecting people from natural disasters*”. It is all repeated in the preparatory group, the subject being “*Expanding children’s perception of the work of specialists protecting people from natural disasters. Earthquake – behavioral rules*”.

B) Education in primary, middle school and high school

- *Guidelines for training for disasters, accidents, emergencies and fires and applying first aid (2002), approved by Ministry of Education and Science and applied 2002/2003 academic year.*

The guideline contains an organizational part, when basic conditions for the training’s conducting, the deadlines and the responsibilities and cooperation between the responsible institutions and the officials are being settled. The creation of *School committee for action during disasters, accidents and catastrophes is being enacted* at the school principal, being the committee chairman, is entrusted with the organization of the training process.

- *Training schedule*

The guideline also puts forward “Training schedule”, prepared with and coordinated with National agency “Civil defense”, National service “Fire and accidents safety” (Ministry of internal affairs) and the Bulgarian Red Cross. The

⁷ See footnote №4

⁸ Instruction №2 of the Ministry of Education and Science for the education and training of the children, the pedagogical, the administrative and the auxiliary personal in kindergartens for safe behavior during *disasters, accidents, emergencies and fires*.
<http://www.kadedauca.com/?id=1316&aid=994>

training schedule contains explanatory notes, distribution of the training material (prepared in a table mode for classes and subjects), as well as description of the activities in any subjects for any of the classes.

The subjects are worked out for 5 academic hours yearly and have to be conducted by the head teaches of the class in the in a special weekly period dedicated to the class – for students of I to IX class including. For students of X to XII class the activities are also again planned for 5 hours yearly, but will be done in one day – during the conduct of 2 school lessons planned in the program (in the days stipulated as a cushion of school) when the school plans for actions during disasters, accidents, emergencies and fires will be studied and practically mastered.

The earthquake related subject is part of the Training program initially (in II, III and IV grade) and in middle school (in VI grade). AS to the problems with children’s emotions we could point out the Psychological help included in all 3 steps of the (initially – in I,II and III grade; middle school – VI; high school – in VIII, IX and X grade).

- *National educational requirements for educational contents*

In the educational system under Regulation № 2/2000 for the educational contents the former have been approved.

⁹. National educational requirements for educational contents for civil education¹⁰ regulations related to the purposes for disaster protection training can be found only in the initial stage:

National educational requirements for educational contents for civil education (initial stage – I-IV grade)	
Main body of the educational content:	Standards:
<i>V. Life protection and reaction in critical situations</i>	<ol style="list-style-type: none"> 1. Knows the rules of road safety and keeps them 2. Knows what to do and who to ask in life-threatening situations (disasters, fires, incidents) 3. Builds up elementary skills to deal in critical situations and conflicts.

⁹On the basis of this *National educational requirements for educational contents* the school programs for the different subjects are being prepared

¹⁰ There is no separate subject on civil education. Its this *National educational requirements for educational contents* are to be integrated and covered by other subjects.

C) SWOT Analysis – normative base

SWOT Analysis	
Strong sides	Weak sides
Availability of normative base (mostly School timetable) related to the training for protection during disasters	The school timetable differs significantly from the accepted by MOMH format for a school timetable for a certain subject – it lacks basic elements, concrete parameters of the learning process and it is not correlative to the system of established national educational requirements and standards for a learning content.
Stipulated education for children from kindergartens, as well as for students in primary and secondary	The time earmarked for teaching is absolutely insufficient.
Talking about subjects related to earthquakes and dealing with children's emotions on the level of School timetable.	The ill-founded distribution of these subjects to the corresponding steps of education/grades. Problems and vagueness in content plan. The subjects in not taught as separate in kindergartens.
	The training is done by the head teachers, who do not have special experience in this area.

3.3. Questionnaires for pupils and for adults

In relation to the 2 types of questionnaires – for pupils and for adults, the following was realized in the period Mai/July 2011:

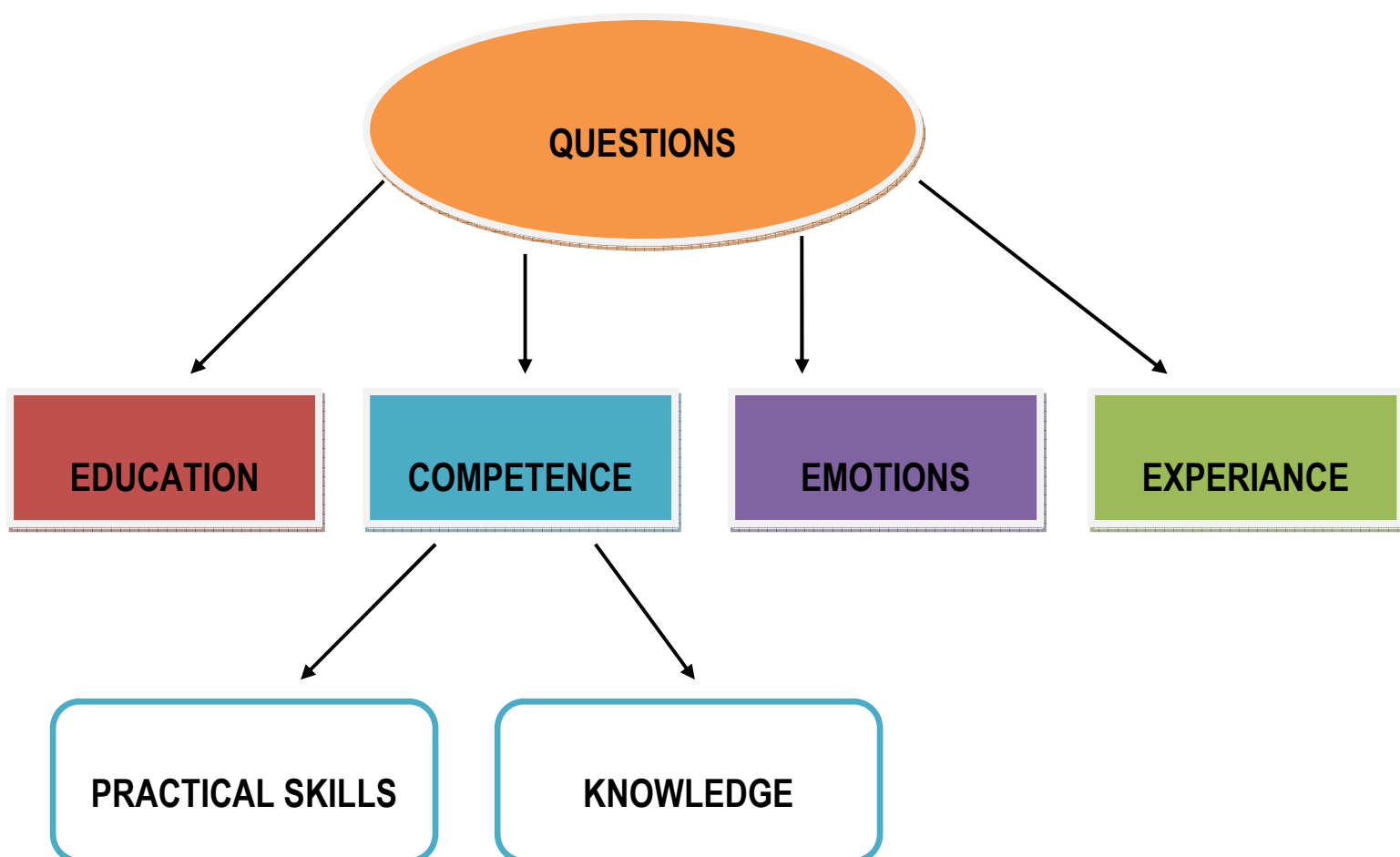
- ✓ Translation of the questionnaires in Bulgarian;
- ✓ The conduct of the inquiries in 2 Bulgarian cities – Sofa and Brezovo (the choice of the cities allows for comparative analyses between the results in the capital and the small town¹¹);
- ✓ Processing and summing up of the data;
- ✓ Graphic presentation of the data;
- ✓ The conduct of structural and comparative analyses of the results;
- ✓ Drawing main conclusions about the needs – during the training, in relation to the increasing of the information flow about earthquakes, as well as dealing with children's emotions.

¹¹see: [Annex №1 - Questionnaires for Pupils – Compared Results \(charts\)](#)

A) Questionnaires for pupils

The survey is done among 86 pupils¹². The first step related to the structural analyses of the answers is directed to the typology of the questions – illustrated graphically by the following figure:

ТИПОЛОГИЗАЦИЯ НА ВЪПРОСИТЕ ОТ Questionnaires for Pupils



On the basis of this structure the questions of this survey are subdivided to the respective kind¹³, which gives opportunity for structural analyses of the results.

Main conclusions on the basis of the structural analyses of the surveys Основни

- ✓ In relation to the no doubt most important competence – **practical skills** – it could be concluded that students have such (charts 11-12, Annex №1);

¹² For the profile of the participants see: Charts 1-3, in: [Annex №1 - Questionnaires for Pupils – Compared Results \(charts\)](#)

¹³ see: [Annex № 2 - СТРУКТУРИРАНЕ НА ВЪПРОСИТЕ om Questionnaires for Pupils \(table\)](#)

- ✓ Good results are seen to the overwhelming in the survey questions about **knowledge** (charts 4,5,9,10, Annex №1);
- ✓ The results are a bit unexpected in the part related to **emotions**. First off, it is not about the little number of answers describing the feeling related to EQ as „happiness” and / or “excitement” (charts 7, Annex №1). To try and interpret these answers, 2 things have to be pointed out – first, it must not be forgotten that a big part of the participants are teenagers and answers like theirs could be translated as a desire to be “cool”. The second conclusion, however, is far more important – there is a big probability that the children have never (or extremely rare) had any kind of result-oriented activities, related to understanding and commenting on their feelings.
- ✓ The alarming result is related to the part **education**, covered by the question: *Have you ever taken part in an earthquake drill at school?* (charts 13, Annex №1). At first sight, the almost equal division of the answers “Yes („every year” + „one time”) and “No” (“never”), is a paradox when it is about students from 2 different school from 2 towns (as is obvious from the applied chart, the differences are not based on location or age). This paradox could be explained with the so-called “legitimate answer” (“Yes”) – this explanation is supported by the normative regulation. Indeed, in Bulgaria according to the educational plan there is supposed to be a lesson twice a year, related to studying the plan for exiting the school during a disaster. Unfortunately, based on conversations with teachers across the country, we could say that this activity is more of a formality – it may not be conducted at all, but if it is conducted it is too formal. What is more, the plans in question are not modernized.

Main conclusions on the basis of structural analyses of the surveys

The almost equal number of participants from the two towns (42 : 44; chart 3, Annex 1) gives the opportunity for comparing the results (similarities and differences) between the capital and the small town¹⁴. However, as could be seen from the applied comparative graphics, the expected difference (in so far as children from the capital have access to much more educational resources) is barely noticeable, there is even a bit superiority in favor of the small town. We commented above the more or less lack education about EQ and in the meantime the presence of competence (both practical skills and knowledge). One of the conclusions, which could be drawn here, is that knowledge and skills in this important area do not come from the school. Eventually, during the analyses of the survey for the adults (parents and teachers being the priority) we will see that they as well do not bear “guilt” for these skills¹⁵. Unfortunately, as long as it is about the “origin” of this knowledge and skills, we could only speculate.

A note related to the comparative analyses of the answers

There are no observable differences based on age or gender in any of the questions.

¹⁴ The population in Sofia is 1 million and 400 hundred thousand people, whereas Brezovo’s is under.

¹⁵ Of course, it must not be forgotten, that the surveyed parents are not the parents of these children, but still the results from the surveys for the adults are quite indicative.

B) Questionnaires for adults

The survey is done among 50 adults¹⁶. The same typology of the question may be used in relation to the structural analyses¹⁷. In this case it is appropriate to add a fifth type of – *concerning children*¹⁸. Of course, in this case it is possible that some type of questions will overlap, meaning that a question affiliated to *emotions* could be included in *concerning children* as well. This kind of structuring gives the opportunity for an interesting observation. The mentioned above overlapping, as is clearly observed in the applied figure, is seen between the areas *emotions - concerning children* (all 4 questions!) and *practical skills - concerning children* (1 question).

Main conclusions on the basis of the structural analyses of the questionnaires

The bigger part of the questions are about knowledge (6 questions) and emotions (4 questions), as well as *concerning children* (5 questions).

- ✓ The results related to knowledge are more or less equally distributed between “right” and “wrong”, respectively presence/lack of knowledge (charts 7,8, 10, Annex №4). An exception here is the “relieving” result demonstrating knowledge of the (chart 11, Annex№4)¹⁹. Special attention has to be paid to two more results. The first one is related to the question “*Is the earthquake phenomenon frequent in your country?*” where the opposing in character answers are strangely equally distributed (charts 9, Annex №4)²⁰. Unawareness like that is frightening, provided that earthquakes in Bulgaria are neither rare, nor “weak”.²¹ (namely the interpretation that “large earthquake” is understood as “recurring phenomenon” is not applicable in this case).
Here we could also incorporate the results related to **experience**, since both questions of this type (chart 6²²) are related to personal experience, where those who lived through earthquakes are overwhelming. This, however, is not according to them a frequent event (comparing with the results we commented upon above). The second result deserving special attention is again the equally distributed opposing in type answers to the question *Are you aware of the earthquake protection measures in your country?* (especially the very important sub-question: *What are your main sources of information?*²³) (charts 12,13, Annex №4). First off, it has to be pointed out that this dangerous lack of knowledge could reflect on the lack or the small number of

¹⁶ About the participants' profiles, see: Charts 1-5, in: [Annex №3 - Questionnaires for Adults – Results \(charts\)](#)

¹⁷ see: figure on p. 11 from this report

¹⁸ see: [Annex №4 - СТРУКТУРИРАНЕ НА ВЪПРОСИТЕ om Questionnaires for Adults \(table\)](#)

¹⁹ This fact could be explained with the conducted large campaign for popularizing of № 112, as well as from the results showing the media's influence (charts 13, Appendix №4).

²⁰ In this case, as could be seen from the participants' profiles, this result is because of neither the (almost 100% of the participants are from Sofia), nor from age or gender differences.

²¹ see: [Annex №7 - Най-силните земетресения, засегнаха България през XX и XXI век](#)

²² The results from the sub-question “*Do you remember the last earthquake occurred in your country?*” belonging to experience, are not suitable for graphic presentation. It is to be pointed out that the memories of the people (almost 100 %) is related to earthquakes of the last 2 years.

²³ This sub-question is subdivided to the type *education*, whereas the main question is related to *knowledge*.

national protection measures. Meanwhile, the “knowing people” acquire this information mainly through the media, where it could easily cut both ways. What is more, this is the only question directly related to **education**. Here we have to point out that the lack of education is also visible from the unawareness that Bulgaria is an earthquake zone, where this phenomenon is frequent and dangerous (as is shown above).

- ✓ When it comes to the important competence – **practical skills** – the conclusions seem contradictory. While the adults possess such skills (charts 15, Annex №4), the bigger number have not taken any personal protection measures (charts 14, Annex №4). The last one corresponds with the analyzed above result, related to the idea that earthquakes are not a real threat to Bulgaria.
- ✓ The questions, respectively the answers (charts 16-19, Annex №4), that reflect to **emotions** (reminder that all 4 questions are also **concerning children**, so they are one of the most important for the purposes of the project) are not for analyses, but more for an “opinion” (charts 16-18) and there is no “wrong” answer (except for *I don't know*, but it is not often²⁴). An exception is maybe the most important question - *Do you know how to comfort a child that is traumatised from an earthquake?* (chart 19) – where the bigger part of the participants do not know what to do. We must not forget that the “knowing people” other than really having such skills could also give a “legitimate” answer or put a sign of equality between calming down the child in a normal situation and in a situation after an earthquake (meaning the specific post-earthquake trauma is seen as resembling others daily problems which parents or teachers have to deal with every day).

A note about the lack of a comparative analysis of the answers

Unlike the results of the questionnaires for students, for the adults it is not possible to make a comparative analysis in relation to residence, since almost all participants are from one city (and all have higher education). Differences on the basis of gender, age or occupation are not observable here as well

C) Compared Conclusions (pupils: adults)

The conclusions drawn above about the results of the two types of questionnaires allow for comparison (of course, with a little bit of catch, since the questions are different) between the two types of participants - pupils and adults:

- The students show better competences – up to the standards of practical skills, as well as knowledge;
- There are problems with both groups in relation to education and emotions.

²⁴ In the meantime, however, the presence of an answer like that, even though not often, is worrying!

3.4. Interviews

In relation to the interviews the following activities were executed in the period May-June 2011 year:

- ✓ work meetings for identification of national experts, who were going to be interviewed
- ✓ Preliminary meetings with the experts, selected by established criteria
- ✓ Writing down questions for the interviews
- ✓ organizing and recording
- ✓ Translation in English, assembling and subtitling the two interviews
- ✓ Publishing the two interviews in the Facebook web page of *Center for Educational Initiative*²⁵¹

After the work meetings (aiming to identify the suitable for the purposes of the project national experts that are to be interviewed) were conducted, two interviews were held. Presenting two different points of view – the standpoints of experts from various fields that have an opinion about the problems of the project – gives an opportunity of a good comparative perspective, which is indisputably useful for detecting the needs and issues in this area. It should be paid attention that before assembling them, the interviews lasted about 1 hour; this complete version, as well as the preliminary conversations with the experts, will also be used for the purposes of the present report.

A) Interview with Ms. Deyana Zarkova

Presentation

Ms. Deyana Zarkova was a Chief Expert at the *former*²⁶ National Training Centre at the *former* Ministry of Emergency Situations, with extensive experience in training related to disasters, emergency situations and accidents (including EQ)



Ms Zarkova's master dissertation topic is: *Institutional subject of national policy to protect populations in disasters and emergency situations (problems and changes)*

Considering all the mentioned above, it was decided to be interviewed exactly that expert.

Highlights from the interview

Main topics discussed during the preliminary meeting and the interview²⁷, were:

- national policy to protect populations in disasters and emergency situations (2007-2009);

²⁵ <http://www.youtube.com/watch?v=NhRA29VeiW0&feature=relmfu> – Interview with *Ms. Deyana Zarkova*
http://www.youtube.com/watch?v=UUyaLKnANWs&feature=channel_video_title – Interview with *Alexandar Dimitrov MD, PhD*

²⁶ This extremely important problem will be commented in section 3.6. Selected Bad Practices

²⁷ See: Annex №6 - Текст на Interview with Ms. Deyana Zarkova, published on the Facebook page of *Center for Educational Initiatives*
<http://www.youtube.com/watch?v=NhRA29VeiW0&feature=relmfu>

- Good Practices²⁸ (including associated with disadvantaged children); coordinated or conducted by the former Ministry of Emergency Situations;
- inclusion in the network of training centers at *the European and Mediterranean Major Hazards Agreement (EUR-OPA)* at the Council of Europe;
- how good practices ended²⁹; (closing the Ministry of Emergency Situations in the end of 2009 year)
- shortages (needs): insufficient products and activities, particularly orientated toward disadvantaged parents and children; teachers need to develop a more serious approach to this topic in those hours, dedicated to disaster prevention; experts, specially trained to cope with children emotions after surviving the disaster (including and EQ); a long-term, functioning and coordinated national policy for reaction in case of an earthquake.;

²⁸ They will be properly described in section [3.5. Selected Good Practices](#)

²⁹ For details, see: section [3.6. Selected Bad Practices](#)



B) Interview with Alexandar Dimitrov MD, PhD

Presentation

Alexandar Dimitrov is a doctor, member of the *Military Medical Detachment for Emergency Response* since 1992, when the department was established. For 15 years, he specialized in rehabilitation of spinal cord injuries. Thereafter, with 20 years of experience with medical security in cases of natural and technological disasters and major accidents with many casualties and victims, who need medical treatment during the acute stage, rehabilitation and later often many years of social adaptation. He has attended many rescue operations following disastrous earthquakes in many countries (for examples – in Spitak, Armenia 1988; in Turkey 2003).

The expert's personal choice was dictated by his willing of seeing the perspective of a man, who has practice, has taken part in rescue missions and has specific experience with kids in emergency situations following an earthquake and also having theoretical knowledge, as far as his PhD is connected with c medical help during earthquakes and terrorist attacks.

Highlights from the interview

During the preliminary meeting and while recording the interview, D-r Dimitrov has outlined some not only interesting but also important for the purposes of the project aspects related to

- ✓ observation of reactions of children, survived earthquakes;
- ✓ preparedness for reaction of the responsible Bulgarian authorities during and after an earthquake;
- ✓ Problems and needs in this area.

Some of the main topics mentioned a=in the meetings and the interview³⁰ will be outlined here:

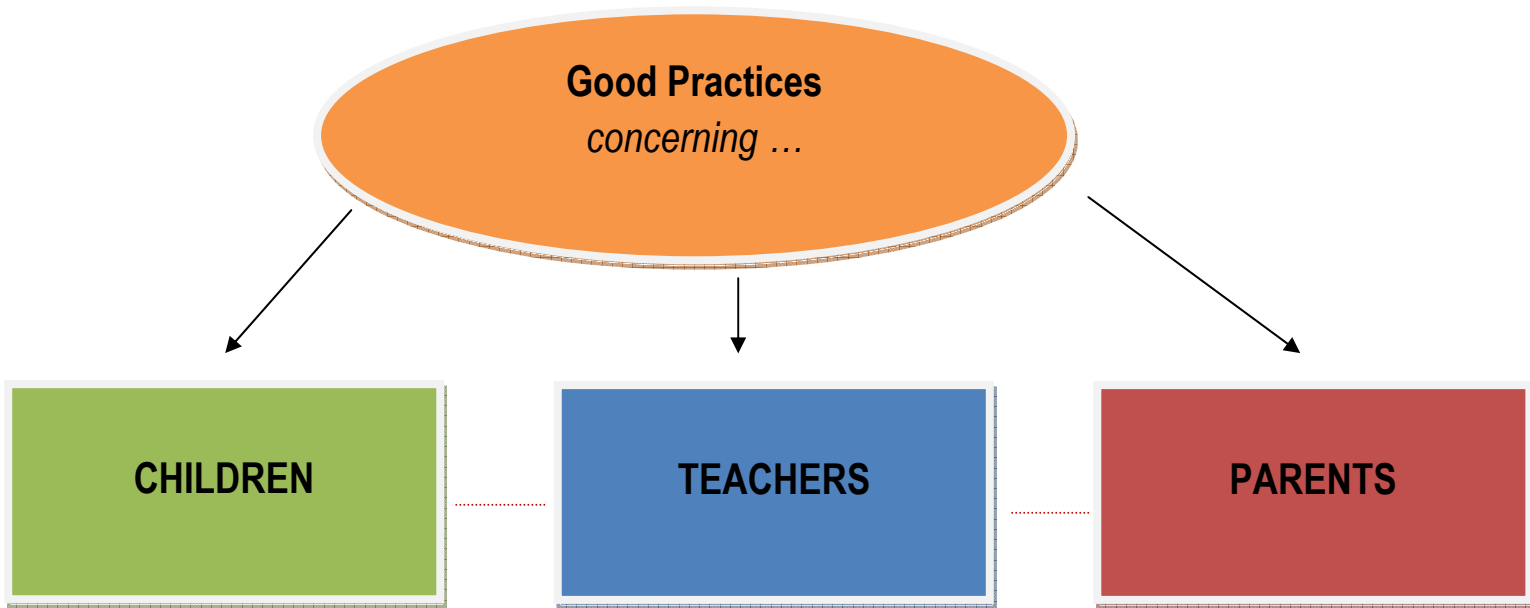
- Observed reactions of children after earthquake – panic, stupor, faster biological needs(because biological processes are faster);
- children are capable of handling emergency situations following an earthquake faster than adults;
- specifics of the earthquake as a disaster – everybody is traumatized at the same moment;
- Armenia (1988) and the so-called Survivor syndrome (a story about a child);
- sometimes the absence of physical trauma leads to stronger psychological shock;
- the great importance of helpers with pedagogical and psychological background knowledge;
- to have both a psychologist (trained in overcoming emotional trauma) and a psychiatrist in the medical crew;
- the great importance of first aid and so called „golden hour“; dealing with panic and shock reaction;

³⁰ Виж: Annex №5 - [Текст на Interview with Alexandar Dimitrov MD, PhD](http://www.youtube.com/watch?v=UUyaLKnANWs&feature=channel_video_title), публикувано на Facebook страницата на *Center for Educational Initiatives* http://www.youtube.com/watch?v=UUyaLKnANWs&feature=channel_video_title

- shortages(needs): well prepared volunteer paramedical teams locally; a long-term, functioning, coordinated and well-maintained infrastructure for reaction in case of an earthquake; a coordination center on national level; some form of extracurricular education for children to react adequately in case of emergency;
- common mistakes or misbeliefs in relation to earthquakes;
- the importance of preparation on all levels.

3.5. Selected Good Practices

Keeping in mind the project's aims, the presentation of the good practices³¹ related to increasing information flow about earthquakes and dealing with children's emotions caused by such disasters will be structured as 3 main groups:



Of course, it is possible a good practice to refer to more than one group (then it will be counted to its main target group); such links between the 3 groups are very important, as they show the inclusion of the main actors in the educational process and are usually a guarantee for the quality of the product/the activity.

³¹ Of course, it is about selected good practices (consequently for selected bad practices as well) whose purpose is not thoroughness, but marking of the main guidelines of development.

A) GOOD PRACTICES CONCERNING CHILDREN

The good practices related to children could be divided in two main types – contests and competitions, as well as educative materials and resources. The children could be divided into age limit groups (as we will see, there is a good practice with kindergarten children too). Provided that children in disadvantaged situation are one of the main target groups of the project, the good practices related to them will be presented in a separate rubric. Same goes to practices in relation to *coping with children emotions*.

✓ National drawing competition for children: "Mission: Rescuer"

Mission rescuer is a continuation of the competition for children's painting "I saw the trouble with my eyes...", first held in 2002 by initiative of National agency "Civil defense". From then till 2009 is lead by the Ministry of Emergency Situations. After the closing of the ministry the competition is taken up by the "Fire Safety and Rescue" Directorate General (Ministry of Interior). The competition is held with the partnership of **The Ministry of Education, Youth and Culture** и National Palace of Children



Thematically the competition covers what is taught at schools about actions during disasters and emergencies, giving first aid, helping yourself and others, taught at classes during High school. In addition to assessing children's knowledge – what they visualize when they hear the word disaster, it also showed their artistic skills.

In the competition participate children from the entire country from age 6 to 18, separated into 3 groups by age:

- I group – from 6 to 9 years old;
- II group – from 10 to 14 years old;
- III group – from 15 to 18 years old;

and in 3 categories:

- pupils from specialized classes and art schools;
- pupils with specialized educational needs and homes for children deprived of parental care;



- Pupils from all schools in the educational system, not fitting in the first 2.

The competition is held in 3 phases:

- municipal competition;
- regional competition;
- National competition.



In their essence the kids' paintings express the preparation and the adequate response to emergencies and show the image of the rescuers that fight disasters, help victims and save human life every day

Of course, there are all sorts of prizes for the winners. And from 2007 they win a 4-day work shop at the National School of Fine Arts "Iliq Petrov" as well, which gives them an opportunity to study in specialized workshops on painting, sculpture and graphics.

To promote the competition are undertaken a series of actions – printing of posters and albums with pictures³², conducting an official ceremony for the winners at certain public places (National theater "Ivan Vazov", National gallery of art, Sofia university and etc.), involvement of multiple partners and sponsors, conducting international edition of the competition in 2008 under the auspices of the European and Mediterranean Major Hazards Agreement (EUR-OPA) at the Council of Europe (received are over 1400 paintings from Russia, Turkey, Hungary, Croatia, Slovenia and Indonesia).

For the increased popularity of the contest talks the increase of participants:

- 2006 – 325 paintings;
- 2007 – 419 paintings;
- 2008 – 426 paintings.

The goal of the competition is not only about demonstrating knowledge on the subject, but also about helping to form in the children's mind a positive image of the rescuer and volunteer, and to raise a desire in them to become rescuers and volunteers one day.

✓ Student Competition "Protection in Case of Disasters and Accidents"



The competition is focused on safety in emergency situations and its basic goal is to check the level of the knowledge, skills and habits, gained in the basic training course, as well as to motivate the participants for further preparation for acting in case of emergency situations. The competition is held every year and ran in several rounds – at a municipal, regional and national level. 28 teams with 4 team-members

participate in every round, which has a theoretical and a practical section. The theoretical section consists of a test to assess students' knowledge about correct reactions in emergency situations. During the practical part students show their skills in acting in case of an earthquake and also in case of chemical and radiation accidents.



The competition is held since 1998, and the organizers are the same as mentioned above.

³² See: [Annex №8 – Корица на албума с рисунки от конкурса Mission Rescuer 2008](#)

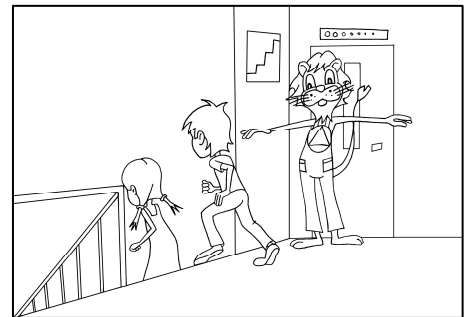
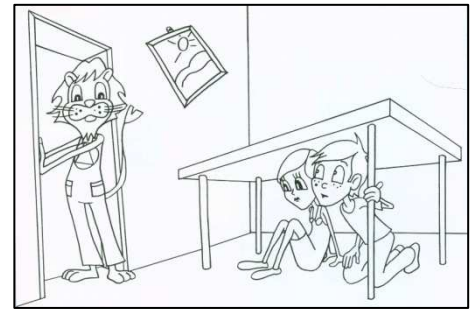
✓ **Educational materials and resources**



- **Children’s Coloring Book “Disasters – important rules for little children”**

A painting book, developed in 2007 by the *National Training Center* (part of the Ministry of Emergency Situations) is designed for the

smallest – kids from kinder garden (can also be used with younger pupils). This is the first helping tool in this area, designed for the smallest. With it children learn the basic rules for reaction in case of different types of disasters in simple way. The book is published in circulation 20 000 numbers (followed by an additional because of the huge interest) and is distributed for free in kinder gardens across the whole country.



- **Training set of boards and cards**



The same year, again the *National Training Center*, and again for the smallest is developed a set of boards and cards about 5 types of disasters, and there are included 4 situations to each of the cards that represent illustrated basic rules for reaction in case of different types of disasters and the set of boards represents the algorithm for actions in case of different disasters.

- **Practical classes and open lessons**



Regularly the *National Training Center* was leading practical classes and open lessons in the kindergartens where the children showed their knowledge and skills for reaction in case of emergency situations.

- **Open door day in the Ministry of Emergency Situations**

Experts and rescuers are showing the necessary equipment in case of emergency situations.



- **Kids site of the Ministry of Emergency Situations**



The site (www.zadeca.mes.bg) starts in the middle of 2008 and was designed for children from 5 to 14 years, and the individual columns were consistent with the age of the audience. The idea was the site to develop in 2 directions- first, as a tool for edutainment (envisaged is the development of various educational logic and situational games), and the second – materials, that can be used in the educational process at school. The idea was this difficult subject to be showed to a children’s audience in a more interesting, attractive and assessable way.

The past sense of the paragraph above, unfortunately, is dictated by the fact that, with the closure of the Ministry, the site ceased to exist as well. A fate that as we will see comes upon most good practices.

- **Good practices related to disadvantaged children**



The first and only step in this direction is realized again by the *National Training Center* (part of the Ministry of Emergency Situations) in 2008 - **Information Campaign for disaster protection training of people with disabilities and/or chronic diseases**. As a part of the campaign called "CLOSE TO YOU", are realized actions aimed at kids in disadvantage:

- Printed brochures with the most important rules for defense against common disasters in our country - in Braille and in audio format as “talking brochures”, as well as recordings of noises accompanying disasters;
- 4 video clips (aired on BNT), one of which is devoted to the theme earthquake and shows the undertaking of adequate defensive actions done by children with cerebral paralysis, without vision, with damaged hearing and asthmatic, assisted by their friends;
- Specialized section on Internet – the Ministry of Emergency Situations site (no longer active – the reasons for which were mentioned above).



- **Good practices related to coping children emotions**



Unfortunately, there are not enough sufficiently qualified experts in this domain and most of all there is lack a coordination unit. As only positive step in this direction can be given the book

“Psychological help and support for children and youths in a disaster” (Guide book for parents, teachers and specialists) written by Iordanka Eneva, published in 2006 and has a content of theoretical and practical guidance. Unfortunately, the book has long been exhausted on the market, and from talks with teachers we know the book is not available at schools’ libraries either

B) GOOD PRACTICES CONCERNING TEACHERS

- **Prevention – Protection – Security. Education On Protection Against Disasters and Accidents**
(Teachers manuals for I to IV, V to VIII and IX to XII grades)



In 2008, as a result of the project “Prevention of Natural Disasters and Accidents through the Secondary Education System in Bulgaria” (within the Ministry of Emergency Situations and United Nations Development Programme; developed by [Paideia Foundation](#)), was published the first of its kind *Teacher’s Manual* that represented a methodology of introducing effective and up-to-date methods of protection-against-disasters-and-industrial-accidents training. The total circulation of the manuals was 44 000 numbers and they were distributed for free among schools from the whole country.

The methodology, designated for teachers, includes 3 Manuals – for each level of education (primary, secondary and upper secondary). The themes are structured in 3 modules: *I. Protection against Disasters and Industrial Accidents; II. Fire Safety and Rescue; III. First Aid* cover all topics, being part of the curriculum in classes by which the head teachers should conduct training for disaster protection within the hours of class. The connected with earthquake topic is studied in an earlier phase (1-4 grade). Each one of the topics is subdivided into several main sections:

- The section IN HELP OF THE TEACHER presents in a table the met standards, the expected results and leaning objectives, the overlapped ideas, concepts and skills, the suggested methods, interactive techniques for learning, and also possible cross-curricular links.
Opportunities are presented about how learning about protection of disasters and emergencies can be held not only in the hours of class, but also be included in the free elective subjects, extracurricular activities, and separate topics to be integrated into other curriculum classes.
- TO LEARN TOGETHER – in this main section are given detailed instructions on how to take on a given class. The section includes not only theoretical material, but also suggesting how to use different methods and techniques of teaching, tasks for the pupils and opportunities to integrate the parents in the learning process.

- The section FOR ADDITIONAL INFORMATION is on a disk, added to the Book for the teacher for high school phase, and consists of: annotated useful links structured both into topics and into phases of the education; a list of publications in Bulgarian language, which can be used in the learning process – not only for preparation, but also during teaching; main normative acts, linked with protection of disasters; a list of titles of films and documentaries, which can also help the learning process..
- The last section TO LEARN PLAYING given the teachers multiple games by which to diversify the learning process.

In these teachers manuals covers not only the need theoretical material, but also a multiple number of suggestions for interactive methods and techniques (including also techniques for dealing with stress and emotions after having survived a disaster). The main goal is to provide training by active learning, based on the (teacher - pupil - parent) principle of participation

As an additional activity under the prepared teachers manuals needs to be mentioned the 2 undertaken learning seminars with teachers from the country, representing the products and giving the common directions for work with them.

It is important to say that during the past 3 years (since publishing the manuals) there was an opportunity for feedback and evaluation of the product. The responses given from teachers show that the manuals truly fulfill their goals and for the first time education, connected with disasters and emergencies, are conducted thoroughly and raise interest in pupils. A proof for that are also the many conducted open lessons, based on the manuals. The problem is that the given by the curriculum time is highly insufficient, even though the methodical works give opportunity and show how the material should be taught in other classes as well or as extracurricular activity.

C) GOOD PRACTICES CONCERNING PARENTS

Unfortunately, noteworthy and geared to parents activities/materials do not exist. We can only note indirect aspects – the integrating of parents in the described above Teachers Manuals, as well as the mentioned book about the problem of psychological help and support.

D) SWOT Analysis - GOOD PRACTICES

SWOT Analysis	
Strong sides	Weak sides
	Now the lack of a coordinate center, responsible for the teaching and preparing of materials; highly insufficient partnerships of nongovernment and city organizations;
	Most of the good practices are common – linked with all kinds of disasters and emergencies, and not specifically with earthquakes;
	Highly insufficient time for teaching the topic at school;
Available materials for the smallest (children in kinder garden);	The lack of manuals for pupils;

The presence of competition;	the lack of interactive games in Bulgarian language for children/teachers/parents; Even though they still take place, holding these competitions is more a habit than a attempt to magnify their range, popularity and etc.
	Insufficient resources connected with coping children's emotions;
наличие of a good and tested product or teachers;	Insufficient number of teaching seminars to prepare the teachers;
	The lack of platform, where to present the available resources and to publish new ones;
	The lack of specialized and specifically orientated to parents materials and activities;

3.6. Selected Bad Practices or How good practices ended

As it was shown by the mentioned above good practices, most of which are realized (coordinated, created and organized) by the Ministry of Emergency Situations. One of the reasons for that was that there was a specialized department - Directorate National Training Center and Preparation of the Private Sector – whose main goal was to improve the quality of disaster protection, preparedness and response education of different target groups (with main focus on children, teachers and parents). Unfortunately, this structure was shut down³³ in the end of 2009, it existed for only three years. The functions and initiatives of that special unit (and also as a whole of the ministry) should be taken n by the "Fire Safety and Rescue" Directorate General към Ministry of Interior. It is also important to mention the fact that the mentioned unit “shelters”, as well as „Civil Defense” – the leading governmental service for civil protection, the cultural values of Bulgaria for disasters, emergencies, terrorist attacks and military attacks against the country, that has existed under different names during the period 18 of July 1936 – 1 of January 2011. Unfortunately, the uniting of everything into a single unit (at the expense of a whole ministry) does not lead exactly to the needed one focal point, simply because the goals of that directory are others – priority associated with fire safety, lacking an accent on educational politics and etc.

It was mentioned above that the undertaking of the competition for a children's painting “Mission: Rescuer”, as well as the school's competition do go on, but more as a stall practice. This is obvious by a series of scars – the lack of any information on the site of the "Fire Safety and Rescue" Directorate General³⁴, the lack of promoting materials or the highly insufficient information for these events in the internet space. Maybe the reason that they keep taking place is that they are a traditional part of the National calendar for extra curriculum activities of The Ministry of Education, Youth and Culture.

The publishing of teaching materials, connected with disasters and emergencies, is shut down,. That is how the good practices were turned into bad ones... Another similar case – “one of the experts' biggest successes was the inclusion in the network of training centers at the European and Mediterranean Major Hazards Agreement (EUR-OPA) at the Council of Europe whose main goal is prevention. Those experts worked purposefully and even

³³The reasons for closing The Ministry of Emergency Situations down are not a subject of discussion in this reportне са обект на анализ в настоящия доклад.

³⁴ See: <http://www.nspbzn.mvr.bg> (the page is currently in Bulgarian, although there is an English option)

developed a project for interactive games aiding the training of children for action in emergency situations. But with the closing of the Ministry its' realization ceased and it didn't work out"³⁵.

Unfortunately, that list might continue...

3.7. Conclusions: Needs

On the basis of everything above few conclusions could be drawn about the needs (resp. the shortages) related to increasing earthquake information flow and dealing with children's emotions caused by such disasters. We will now try to summarize and plan basic (big part of the conclusions were made in the report³⁶), of significant priority and of course executable³⁷ (real and adequate) measures for increasing the education in this area.

The need will also be structured in 3 main groups:

A) NEEDS CONCERNING CHILDREN

- ✓ A main necessity is the drawing up of manuals (educational materials and recourses) for students – for each of the stages of their education and adequate with their age, as well as stimulating team work and based on modern, attractive and multimedia methods.
- ✓ Continuing the policy related to the drawing up of manuals and executing events for children in a disadvantaged position.
- ✓ Continuing the policy related to the drawing up of manuals and executing events for kindergarten children.

B) NEEDS CONCERNING TEACHERS

- ✓ Organizing and conducting educative seminars for the head teachers.

C) NEEDS CONCERNING PARENTS

³⁵ [Annex №6 - Текст на Interview with Ms. Deyana Zarkova](#)

³⁶ See: [SWOT Analysis – нормативна база \(стр. 10\)](#); [SWOT Analysis – Good Practices \(стр. 25\)](#)

³⁷ This means it will not be referenced to changes on normative base, school timetable, etc. even though these measures are needed and urgent.

- ✓ **Parents' integration** in the educative process through increasing their knowledge on the subject, as well as organizing and conducting events in this direction.

D) NEEDS CONCERNING CHILDREN – TEACHERS - PARENTS

- ✓ May be the most important need is related to the so called education through participation, where children + teachers + parents take part. In this direction, extracurricular activities and events have to be organized to increase the knowledge and to test the practical skills for reaction during and after an earthquake.
- ✓ Creating products related to **coping with children's emotion**³⁸;
- ✓ Working out and creating an online platform where the old and the new resources could be published.
- ✓ Creating of a partnership web including government organs (on a local, district and national level), school and private partners who would help for the realization of the mentioned above needs. Създаване на **партньорска мрежа**, включваща държавни органи (на местно, общинско и национално ниво), поп-governmental organisations, училища и части партньори, които да спомогнат за реализацията на гореизложените нужди.

³⁸ This is related firstly to qualifying experts in that area.

3.8. List of Annex

[Annex №1 - Questionnaires for Pupils – Compared Results \(charts\)](#)

[Annex № 2 - СТРУКТУРИРАНЕ НА ВЪПРОСИТЕ от Questionnaires for Pupils \(table\)](#)

[Annex №3 - Questionnaires for Adults – Results \(charts\)](#)

[Annex №4 - СТРУКТУРИРАНЕ НА ВЪПРОСИТЕ от Questionnaires for Adults \(table\)](#)

[Annex №5 - Текст на Interview with Alexandar Dimitrov](#)

[Annex №6 - Текст на Interview with Ms. Deyana Zarkova](#)

[Annex №7 - Най-силните земетресения, засегнали България през XX и XXI век](#)

[Annex №8 – Корица на албума с рисунки от конкурса Mission Rescuer 2008](#)