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# PROCEEDINGS

# Natural Cataclysms and Global Problems of the Modern Civilization WORLD FORUM -INTERNATIONAL CONGRESS

September 19-21, 2011 –Istanbul, Turkey

Proceedings of the International Congress "Natural Cataclysms and Global Problems of the Modern Civilization". Istanbul, 19-21 September, 2011.

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#### THE ROLE OF PR IN EMERGENCY SITUATIONS

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In the modern condition of globalization, PR takes its worthy place among the system of sciences. PR, public relations - it is the interaction and integration, harmony of organization's interests (including government agencies) with the external environment, the community. Any organization is interested in the PR-service to build an effective communication. PR is particularly actual in crisis (emergency) situations. Here, the primary aim of PR is to

make the right decision and to work with the community continually. Emergency situation – it is always a new situation has arisen suddenly. "Men, in principle, can not make the right decisions in new situations. The surveys have shown that in stressful situations, ancient parts of the people's brains begin to work and it brings us to the animals. Therefore, it is more difficult to develop qualitative solutions. Other surveys have shown that in these situations the person has different blood biochemistry, and it also affect on developing the correct decision. Therefore, you should remember the rule: you must have a prepared plan of action to succeed in a crisis situation. Then this situation is no longer new and unexpected "/1/.

Crisis situations are divided into "known unknowns" and "unknown unknowns" by the classification of S. Black, the British scientist. In the first case we know *what* will happen, but do not know *when* it will happen (in the chemical industry, nuclear energy, pipelines, aircraft, etc.). So there is an opportunity to prepare a security measures. In the second case it is unknown *what* will happen and *when* it will happen /2/. Natural disasters can not be predicted. But we must be ready for them to get out of them unscathed.

#### PR-activities in the emergency situations can be divided into two stages:

1. The complex of preventive measures, undertaken before happening of the emergency situation, are dedicated to avoid or minimize loss of lives, to reduce the damage of the environment and material losses in the case of its occurrence.

2. Communication works carried out after the accident and emergency situations. Communications are directed to the community for saving lives and preserve human health, providing psychological support to them.

One of the examples of the lack of PR is an occasion, that took place in Almaty on May 1, 2011. This situation has shown the inability of the relevant authorities to conduct communications in a crisis situation, to apply effective PR-technologies.

Almaty is one of the most beautiful cities of Kazakhstan, located at the foot of the emerald ridges of the Tien Shan. Some sources claim that trade settlement Almaty was located on the famous caravan route - the Silk Way Road. In the XIII century it was destroyed by a horde of Genghis Khan /3/. Verny city was built, near the ruins of the ancient town in 1854. Then, in Soviet times the city was renamed Alma-Ata, and Alma-Ata was the capital of Kazakhstan from 1929 to 1997. With the adoption of the Constitution of the independence of the country in 1993, former Verny, then Alma-Ata was renamed Almaty. Almaty is located in a broad valley, closed on three sides by powerful mountains, and protected by green areas. The city covers an area more than 170 square kilometers. The city is located on the removal of old and young sediments of the Bolshaya

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and Malaya Almatinka rivers and their tributaries. Almaty with the population of 1.5 million is the largest metropolis in Kazakhstan. The city is located in a seismic zone with magnitude of 9 point. The city suffered three devastating earthquakes in 1887, 1889 and 1911. A. Nurmagambetov, wellknown Kazakhstani geophysicist and seismologist, with reference to international experience points out that "the large earthquakes with a magnitude of 9 points must be repeated in the same place with intervals from 80 to 200 years" /4/.

The last strongest earthquake destroyed Verny in 1911. This earthquake was attributed to the 10 strongest earthquakes of the last century, and the probability of recurrence of the devastating earthquake in that area, is large enough, because the last earthquake took place 100 years ago. The tension greatly accumulated in the area so that as a result it could run into the strongest natural phenomenon. An earthquake happened in Almaty on May 1, 2011 at 8.31by local time. Followed aftershocks continued until May 2. According to the Ministry of Emergency Situations, eight aftershocks were recorded in the period from 1 to 2 May, 2011 on the territory of Almaty city and Almaty region. The Ministry also clarifies, that in particular, there were four earthquakes on May 1, the epicenter of which was located 73-75 km north-east of Almaty. The first earth shock happened at 08.31, the second - at 13.41, the third - in 15.13, the fourth - at 17.37. The earth shocks with a magnitude of 4 points were felt in Almaty, and in Taldykorgan they comprised 3-4 points by MSK-64 scale. Four earthquakes occurred on May 2. The first earth shock happened at 02.29. The

earth shocks comprised 4 points by MSK-64 scale were felt in Almaty. The second earth shock happened at 05.27, the third - at 05.52, the fourth - at 08.31. The earth shocks comprised 2-3 points by MSK-64 scale were felt in Almaty /5/.

Meanwhile, according to the European-Mediterranean Seismological Centre ten earthquakes took place in the south-east of Kazakhstan with a magnitude of 3.2-5.5 on May 1-2, 2011 /5/. The duration of series of earth shocks never there before coupled with a complete lack of any information from the authorities, created a panic among residents of the city. Unwarned people fled their homes, many have left the city. By the evening, the situation had been completely out of control. The rumors about the city was expecting a devastating earthquake spread with lightning speed. As you know, the rumors in crisis situation attain particular color. Some public figures, trying to calm people, published what to do in the case of earthquake on their blogs. But others, less responsible well-known personalities, scared their fans telling them that they had left the city. Panic arose for two reasons. At first, the city authorities reacted too late, not tried to warn and reassure the public. At second, on Twitter, the microblogging network, and through modern tools of communication the citizens of Almaty tried to clarify the situation, but found much information about the disaster coming. The rumors, that the emergency services predict a devastating earthquake in the next few hours, begun actively spread on social networks.

After the first earth shocks, people left more than 600 messages on the popular Kazakhstani forum for 10 minutes, and about 10,000 people visited the forum during that time and all they were interested in the earthquake. The official site of the Department of Emergency Situations of Almaty could not support the load, and their server crashed from the visitors influx. Later the department reported that there would not predicted a devastating earthquake in the near future in the country. During the XX century, especially in the last 20 years, intensified urbanization has occurred in Kazakhstan. It led to augmentation increase in the number of residents in urban areas, where now the vast majority of the population lives. For example, the officially population of Almaty city is 1.5 million people, but the real number is about 2 millions /5/.

Despite of the fact that modern seismology has advanced far ahead and can predict earthquakes with high probability, to calculate the date and even the year of the accident is very difficult. Therefore, warning people about the threat of earthquakes is difficult too. However, the competent authorities had to use the PR-instruments to prevent the panic in that crisis situation. There were opportunities to use modern tools of communication: social networks, Twitter, blogs, forums, sending SMS-messages on mobile phones. The same evening, the Ministry of Emergency Situations developed the official account on Twitter, but instead of encouraging people, they claimed the starting of a press conference at 12 o'clock at night. Many people stayed up all night with their young children on the street. Only the official press conference of the city authorities, *Proceedings of the International Congress "Natural Cataclysms and Global Problems of* 

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which was organized in 15 hours after the first earth chock, reassured residents. As the situation showed, modern tools of communication such as cell phones, social networks, forums, blogs, short messaging servers, may throw a million-strong city in panic and chaos in a few hours, but at the same time, their effect can be used to prevent similar situations, such as early warning, education and issue instructions how to behave and what to do. They can help save lives and prevent critical situations.

After a panic among the population, Vladimir Bozhko, the Minister of Emergency Situations of Kazakhstan said: "Lighting past earthquakes in Almaty all possible prospects for rumors, fears of citizens have not been evaluated. Complete information on the development of the situation was not given to the media and citizens." He explained that it was connected with the lack of information on the nature of the earthquake from the Institute of Seismology of the Ministry of Education and Science: if the first earth shock is harbinger of an earthquake or is it an earthquake itself. He also noted that "the Institute of Seismology at that time also collected and analyzed the information on the earth shocks" /5/.

"There were about 1,500 vibrations during two days," - said the minister on the press conference. And he assured to inform people more quickly the next time. He complained that residents did not apply to official sources, but took information from other less reliable sources.

Some citizens appealed to the security departments, where relevant explanations were given /5/. After that situation the Ministry of Emergency Situations apply with proper attention to PR. They have developed a detailed mechanism of interaction during the earthquakes, created a system of civic education activities during the earthquakes. Also the pool of media, who will quickly, almost automatically receive information about emergencies occurring in the country was formed, and the pool of persons of ministries and agencies, who will provide current information on the media's request, was also identified. Vladimir Bozhko, the Minister of the Ministry of Emergency Situations will notify Kazakhstani people on the emergency situations within the country through Twitter, the social network. A special website, "where operational information will be exhibited" is created. SMS-sending will be used also. PR-service of the Ministry of Emergency Situations and the Ministry of Information should show a constant readiness for immediate use of the republican system of public notification and use the most modern informational tools at risk situations, and in case of earthquakes. There are great possibilities of catastrophic seismic events in a time of global activation of seismic processes all around the world. We must not forget that Almaty is one of the most dangerous regions of Central Asia. On the press conference, devoted to the medium-term prognosis on earthquakes for 2011 in Almaty (16.03.11), the participants unanimously declared that a state of readiness for a serious earthquake at a low level in Almaty, because the key issues are unsolved. T. Abakanova, the Director of the Institute of Seismology: "Ensuring of Seismic Safety consists of a number of issues need to be solved: first is the assessment of seismic hazard, the second is the prognosis of the earthquakes and third is the risk assessment and reducing the impact of possible earthquakes by quakeproof construction "/6/.

The density of new building territory of Almaty, in comparison with the density of buildings in earthquake zones of Japan, China, USA, Turkey and other countries are much higher. In the case of a strong, destructive earthquake Kazakhstan will not be able to provide effective help for a very long time. Moreover, not all high-rise buildings of Almaty are in accordance with "the requirements of international practice of choosing the optimal solutions in terms of resonance phenomenon development in the system" soil-content ", because that does not take into account the spectral characteristics of soils at each specific site construction" /7/. The issue on the preparation of the place of population collection, left without shelter, is also not fully resolved. At the epicenter of earthquakes rescue units will not be able to help every person who is in the zone of an emergency the first few hours or even days. Because, as a rule, it is impossible to calculate on the amount of the forces (local rescue services) and resources which are in the epicenter of earthquakes in the first hours or even days, connected with the same losses that professional-and-rescue units will have, as well as it connected with the moral atmosphere which develops within the territory where the accident happens /7/.

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Thus, the role of PR in emergencies, of course, is high, and it is necessary to carry out anticrisis communication. These events can occur in a limited period of time. In such a short time periods the media makes attention on the negatively developed events, which are broadcasted to the public. Crises are constant such as humanity itself. Therefore, you should treat them not as something extraordinary, but rather as an event, which could be controlled. How earlier the first person of a structure (company) is able to understand the help of crisis professionals, there are more chances to correct the situation. Of course, the lack of resources (material, financial, intellectual, and human) will inevitably affect on the work efficiency, and the obtained results. American PR specialists offer to consider the following positions in a similar situation /1/. - The phrase "without comments" will only increase hostility;

- Always try to help;

- It is necessary to know about the issuance of television news and newspapers, do not collect a press conference, when this period is over;

- Meet with reporters in advance, it will help you learn about the technology in their work and they will know about you and your company.

The rapid flow of information stops the appearance of rumors, that will not have to fight and

that otherwise would be another PR program /1/.

The data on the emergency situations of recent years indicate that despite the efforts in most countries, the number of emergencies tends to a significant increase.

As it was mentioned above, during emergencies PR-work aims to minimize losses due to effective preventive actions. The process will be effective only if people know what to do during a disaster and what to expect from it. Therefore, training of the population is an essential part of the work plan of PR-service of the Ministry of Emergency Situations:

- Education for children and youth in schools with an emphasis on what actions should be done in the case of disaster (for example, during the earthquake);

- Special courses for adults;

- Training Programs of the rural population, intended to instruct employees on the work places, providing with necessary information and training them to doing those tasks that they have to take on themselves during emergency situations;

- Informing the public through the media, whether television, radio or print organ can not be compared with the strength of the direct communication with the instructor. At a reasonable presentation the media can be a useful addition to the learning process, covering the broad masses of the population.

Just as the military exercises can not represent the reality of battle, repetitions of readiness to disaster can not represent operations of providing first aid in all their dynamics and show the chaos that would prevail in reality. Nevertheless, this fact can not be excuse for such exercises should not be provided.

PR-service of the Ministry of Emergency Situations under the threat of disasters should:

- To establish contact and exchange of information with the public.

- To establish contact with other government agencies;

- Be in direct contact with the government authorities responsible for the management with operational departments, donors and nongovernmental organizations (NGOs);

- Collect and analyze information and report on international aid (need and use);

- Cooperate in the mobilization of other necessary resources;

-Regularly inform all concerned government agencies, donors and NGOs (nongovernmental organizations);

- To direct the attention of NGOs to the areas and activities where they can be most benefit (which may or may not be the most affected areas).

A striking example of effective organization and communication technologies is the earthquake in north-eastern Japan on March 11, 2011. Despite the strong earthquake there were no panic and looting among the public. Japanese coolness and lack of panic can be explained by the country's readiness for the earthquake in the country a special gathering place, regular exercise, emergency reserve, which is stored in the house of every Japanese. Every day at 17.00 special

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melody sounds, which, in essence, is a test alert services in an emergency on the streets across all the country. Positive results of the organizational PR-activities must be spread, so people can see the results of taken decisions, and proof that PR works. Regardless of the nature and complexity of the crisis on the communicative level, they can be managed, and contribute to achieve the most effective results, and exit from the crisis with minimal losses.

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## SECTION 7 Ecology and Environment USE OF NEW TECHNOLOGIES IN SOLUTION OF ENVIRONMENTAL PROBLEMS IN AZERBAILJAN

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Environmental protection and rational using of its resources under conditions of the rapid growth of industrial production has become one of the actually problems today. The results of human impact on nature must be seen not only in the light of technical progress and population growth, but also depending on social conditions in which they occur.

Changing dynamics of the environment are global and irreversible, stop or influence to them is almost impossible, not now, not in the future even with a very high level of science and technology. The problem is aggregated by the fact that for the last 1.5 century mankind's by irresponsible actions caused significant changes.

The rapid transformation of the environment and the load on the soil in the social production is growing in relation to the development and introduction of new intensive technologies. Construction and operation of industrial manufacturers, mining operations haveresulted in serious destruction of the natural landscape, pollution of soil, water and air a variety of waste. Factors creates emergencies can be divided into anthropogenic and spontaneous, not dependent on the will of man. Accordingly, an environmental emergency may arise as a result of accident or natural disaster. Of course, apart from human exposure to these destructive processes can influence by the impact of nature itself. It is clear that natural cataclysms have a devastating effect on the stable development of world economy, causing enormous economic damage to countries in which occur. Not every country is able to cope with economic losses from natural catastrophes. But if we imagine that natural cataclysm will gain a wide spread character in many countries, the global financial system may not be able to cover the resulting deficit of funds, which undoubtedly will lead to the need to introduce into circulation new money and will result in a global inflation and the subsequent global economic crisis. But the crisis began may prove to be deeper and more extensive than usual, since large-scale natural cataclysms can cause financial problems for many countries simultaneously. Two types of ecological trouble zones have been investigated in the article: zones of ecological disaster and emergency zones (5, 8).

Environmental disaster zone - these are parts of the territory, where as a result of economic or other activities irreversible environmental changes have taken place to such extent that it led to a significant deterioration in population's health, the violation of natural equilibrium, the destruction of natural ecosystems, the degradation of flora and fauna. Under the emergency zone sometimes understood not so much environmental as extraordinary natural and man-made disasters associated with the explosions of gas pipelines, trains, fires, earthquakes, droughts, etc., in the elimination of which involved the Ministry of Emergency Situations (MES). It is necessary to differentiate clearly similarities and differences between the emergencies, the jurisdiction of MES and the emergency situation, entailing the creation of a zone of ecological disaster, which reflect the different spheres of social relations. The similarity between these emergencies is that in both cases there is a violation of the stability of natural areas, to eliminate which is impossible without the

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