

CONTRIBUTION TO DISASTER RISK MANAGEMENT PROCESSES; A CASE STUDY FROM BABADAG, DENIZLI, TURKEY

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ABSTRACT

Disaster management needs to be worked together with all key actors such as decision makers and disaster management organizations, universities and local society. All stakeholders have to play a substantial role in risk management, vulnerability assessment and disaster reduction.

The aim of this paper is to present a sample disaster reduction – management event which is a landslide event that has been continuing for 60 years in Babadag, Denizli. The landslide problem was solved by the contributions of some major actors including local authority, government side, universities and also society.

This study is an example of the contribution of all stakeholders who participate to the solution studies before a disaster occurs. According to research reports, local society were persuaded to move to a new settlement area. During new settlement study social, cultural and economical parameters were considered.

INTRODUCTION

As an old settlement area, Babadağ exist in economic and social areas about 700 years. Babadağ population is approximately 5000. It is known that as one of the oldest settlements where textile industry is very popular there are two automatic loom or semi automatic loom in every house.

Babadag Town has been under land slide risk that is threatening Gündoğdu ward (Fig. 1.) especially for the last 60 years. Due to landslide, official buildings, houses, roads and infrastructures have been damaged.

HISTORICAL DEVELOPMENT OF BABADAĞ LANDSLIDE EVENT

Because of landslide, initial comprehensive surveys were conducted at the beginning of 1940 in Babadağ Town. Some of these survey reports indicated that town should be transferred to a safer place and some report suggested that transfer was not urgent necessity. Following the survey which was conducted on 15.07.1966 a geological report was prepared. According to this report, landslide which occurs due to seasonal changes could not be prevented since the region is surrounded by deep valleys.

The third survey was conducted in the town on 21.11.1967 just after a landslide and a report was prepared on 28.11.1967. In this report, the incident was not considered a serious event which could be solved by local authorities.



Fig. 1. Babadağ Town (www.earth.google.com/intl/tr/)

The following survey was conducted on 16.12.1968 and report suggested that 5 neighborhoods should be transferred to another place.

A report was prepared by the local authorities including mayor, district official head and engineers on 07.04.1978. This report which aimed to transfer of the town was opposed because current economical investment were vital for the local textile industry.

An official request was made to the General Directorate of Disaster Affairs (GDDA) by the Municipality in order to make a survey just after the another landslide event on 11.06.1985 and GDDA responded to this request on 12.08.1985. In general, this response indicated that houses affected by the latest landslide were already determined in the previous survey reports but municipality and local people were not in favor of transferring and at the same time, requested precautions could not solve the whole problem at the landslide area. For that reason it was suggested that instead of repeating a new survey on that landslide area, damaged houses should be determined and owner of these houses should be transferred to a new settlement area.

On 06.01.1989 and 24.01.1990, two specific geological survey report were prepared in order to find a suitable new settlement for the Textile High School.

Another specific survey was conducted on 07.06.1995 and 24.05.1996 in Babadağ town in order to find a new area for Small Industrial Site.

A local study in Babadağ Gündoğdu region was conducted by Pamukkale University and results were sent to General Directorate of Disaster Affairs by the Governor of Denizli on 27.06.2000. In this report, rain, topography, slope, lithology, vibration of loom in the region and underground water movement were counted as the main reasons of the landslides in the area.

Another survey by the GDDA staff was conducted on 28.02.2005 and report stated that boundary of landslide affected areas was determined by a study carried out by four Universities and this study will be completed at the end of 2007.

On 28.05.2006 a panel was organized by Mayor of Babadağ, the scientists and the geological engineers from the Ministry of Public Work and Settlement and the residents have been informed about how local society may be affected by a probable landslide in the region. Final comprehensive survey was conducted on 13-14.09.2006 by GDDA staff in the Babadağ Gündoğdu landslide area and it was determined that most of the houses has been damaged in this neighborhood. According to this geological study report 452 houses, 145 working places and 19 official buildings have to be evacuated. All evacuated building and houses will be demolished by local administrative units.

The slope movements have caused important deformations to buildings, roads and embedded lifelines. The demolished houses are deviated vertically (Photo 2.a., 2.b. and 3.a., 3.b.).



Photo. 2-a. and 2-b. cracks and fissure on the streets and houses



Photo 3.a. and 3.b. vertical inclination and fissure on some houses

New settlement area was determined in the Centre of Denizli and plans for zoning were done. Working places like looms and official buildings by taking into consideration social, economical factors of settlers. In other words settlers will not change their livelihood styles. Several meetings was organized by Denizli Governorship, local authority of Babadağ and GDDA to inform society about new settlement study that environment and life circumstances of settlers are very important in city planning (Photo 4).

Disaster management needs to be worked together with all key actors such as decision makers and disaster management organizations, universities and local society. All stakeholders have to play a substantial role in risk management, vulnerability assessment and disaster reduction. So a new effective approach is needed for gathering stakeholders such as trialogue model.

Dictionary meaning of trialogue is an interchange and discussion of ideas among three groups having different origins, philosophies, principles, etc. (Source: www.yourdictionary.com). When it is applied on disaster management we can think it as a model or metaphor for explaining/helping the meaning of what disaster risk management process is.

Parliamentary of
Denizli, Official
charged with
Babadağ, Mayor of
Babadağ and GDDA
staffs.



Settlers of Babadağ



Photo 4. On14. 02.2008 Meeting of awareness about new settlement study.

Triialogue have three elements and interface. These three elements are government, society and science, and their interfaces are as follows (Hattingh at all, 2007) (Fig.2.);

- an interface between society and science;
- an interface between government and society;
- and an interface between government and science

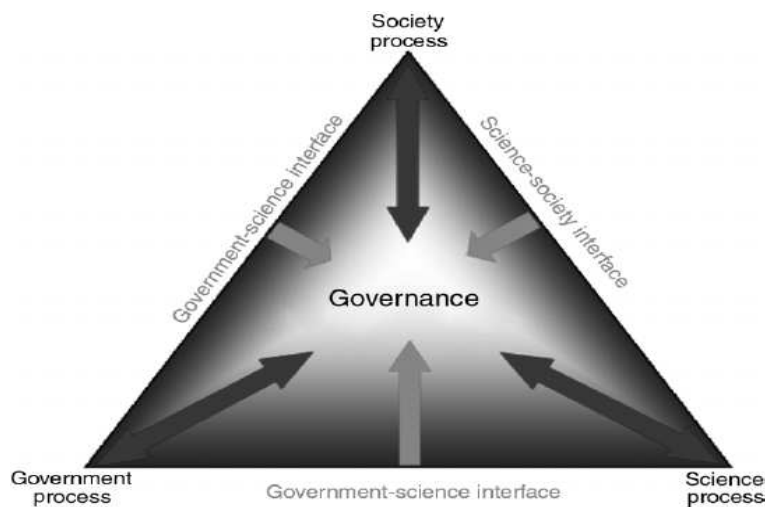


Fig. 2. Schematic representation of the Trialogue Model, showing its three elements and their interfaces (Hattingh at all, 2007).

The Trialogue Model of governance provides a simple conceptual construct which helps to clarify and focus on discussion about current governance processes and structures at different levels of scale (Turton at all, 2006).

Triialogue model can focus on participations approach and bring together different point of their views. So trialogue can provide shared knowledge, experience, program and can link various

elements of disaster subject. Trialogue model can support (contribute to) the training and development of stakeholders and government group, scientific group and public side together represent a working system to reduce disaster risks.

The 1990s was declared the International Decade for Natural Disaster Reduction (IDNDR), one of the principal goals of which was to inculcate a culture of disaster prevention through the wider application of known scientific and technological mechanisms by a better-informed population (<http://www.unep.org>). According to that declaration, disaster working groups were formed by GDDA for every province. That groups work with GDDA in disaster management and risk reduction steps. Trialogue Model can be applied to disaster working groups but GDDA should be in the center.

CONCLUSIONS

That collaborative work among government (GDDA, Governorship of Denizli, Denizli Provincial Directorate of Public Works), local authority of Babadağ, universities and society was the first experience in disaster management.

For effective disaster risk management it is important that creation of disaster prevention culture, improving risk perception, contribution of society in the process of decision and application. In Babadağ event, the fact of vulnerability and environmental risk were developed for local settlers by way of transferring obtained data and collaboration among concerned stakeholders. This method should be an example for the other areas under disaster risk.

Great numbers of displacement causes unknown, anxiety and questions in mind among the people. In order to cope with this, it is necessary to work with psychologists and sociologists.

Although the determination of risk and the awareness of the public are main issues , providing available finance is essential. One of the most important elements to be able to get quick and efficient solution to disaster risk is to inform the public about disaster risk management. For this reason, disaster training and seminars have been most important recently due to climate change. The number of water-related disasters was increased enormously by the Climate change.

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