

In the Wake of the Disaster - Project of Iraqi Scientific Assets Preservation (Case Study)

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Abstract:

It is also known that disasters of all kinds, whether natural or man-made lead to many damages, including what affects the population, or property. The previous research and studies agreed that strategies, capacities, capabilities and measures needed to reduce the negative consequences of disasters.

This study aims to bring into view the precautionary and preventive measures that the libraries and institutions which contain the assets of their country should follow before the occurrence of a man-made or natural disaster. This is due to our experience after the terrorist attack that took place in part of our country Iraq by terrorist groups they called themselves ISIS.

After reviewing most of the measures taken at present, the focus is on the tools used to strengthen and support library buildings to confront exceptional circumstances as well modern technologies that can be used for early warning such as fire alarm equipment and moisture meters. In this study, we will answer a question that has rarely been addressed. What should be done to confront a human terrorist disaster (like ISIS, for example)? What proactive measures should libraries and institutions do to avoid the loss of their assets by terrorist acts?

Based on the United Nations concept of Sendai in 2015, we discussed Priority 4 and explained how the library of Al-Abbas holy shrine (a public library in mid of Iraq), contributed to the preservation of Iraqi scientific assets deposited in other libraries after ISIS attacks which brought damages to many of them, via digitizing old assets where no electronic version is available.

The process of converting old works of all kinds (manuscripts, lithographs, old books, letters, university theses and dissertations, journals, etc.) from paper version to electronic version to ensure that these assets are not lost and it's consider one of the most important pre-emptive steps before a disaster happens.

Keywords: Sendai Framework; Build Back Better; Digitalization; ISIS; Iraqi Scientific Assets Preservation (ISAP); Alabbas Holy Shrine Library.

Introduction

In the beginning, we must know what is meant by a disaster, its types, and which one is more harmful to the libraries throughout history.

A disaster is a serious disruption, occurring over a relatively short time, of the functioning of a community or a society involving widespread human, material, economic or environmental loss and impacts, which exceeds the ability of the affected community or society to cope using its own resources [1][2]. The UN office for Disaster Risk Reduction (UNDRR) define the disaster as a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts [3].

There are two kinds of disasters: natural and man-made:

Natural disasters are extreme, sudden events caused by environmental factors that injure people and damage property. For examples: floods, tornadoes, volcanic eruptions, earthquakes, tsunamis, and other geologic processes. A natural disaster can cause loss of life or damage property, and typically leaves some economic damage in its wake, the severity of which depends on the affected population's resilience or ability to recover and on the infrastructure available [4].

Disaster resulting from man-made hazards as opposed to natural disasters resulting from natural hazards. It's lead to civilian population's casualties, loss of property, loss of basic services, and means of livelihood as a result of war or civil strife. The cause of a human-made disaster can be either intentional (as our study case) or unintentional human actions [5].

Libraries are the same as any other institution that could be subjected to a catastrophe whether natural or man-made, and our history is a witness to many of the destruction that has plagued libraries in particular and in different countries of the world.

If we take a quick glimpse into the conditions of libraries in the past, we find that many of them have been destroyed through the different ages of history.

After verifying the reasons that led to the destruction of these libraries, we noticed the presence of two main factors behind the destruction of one of them is intentional and is caused by man and the other is involuntary representing the natural incidents such as earthquakes, floods and fires.

There has been a large share of libraries that have been exposed to fires. Investigations have shown that one of the main factors contributing to the burning of libraries is the failure to provide public safety conditions such as early warning devices and the incorrect design of their buildings (such as not dividing them into multiple sectors) When a fire occurs.

If we look at the number of destroyed libraries, and extract the libraries that were destroyed by human and destroyed by nature, we reach the percentages shown in the table below.

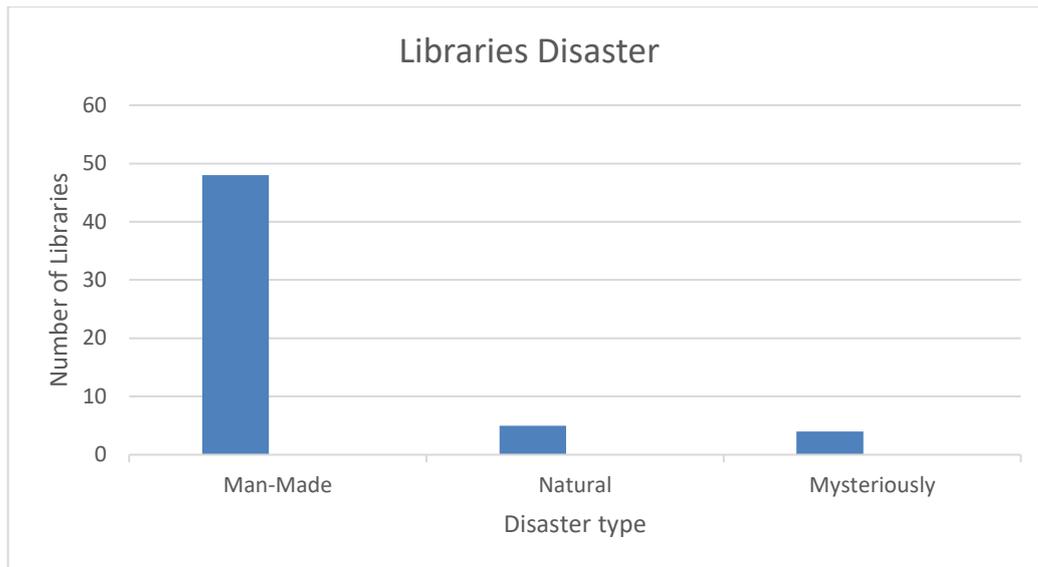


Chart (1): Libraries Disaster in History [6][7][8]

We do not falsely claim that man is the greatest enemy of civilization, and lessons and lessons must be taken from history.

For example, we note that Iraq has witnessed five horrific cases of destruction of its libraries, all of which were man-made, both in the old age when the Baghdad library was burnt or in the modern era, when the Mosul and Anbar libraries, Iraqi cities invaded by a terrorist organization, were destroyed.

Implementation of Sendai Framework

Before we explain how the Sendai framework was applied in this research, we need to know what is meant by the Sendai framework.

The Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted by UN Member States on 18 March 2015 at the Third UN World Conference on Disaster Risk Reduction in Sendai City, Miyagi Prefecture, Japan. The Sendai Framework is the first major agreement of the post-2015 development agenda, with seven targets and four priorities for action [9].

Via the framework, Member States have called for enhanced scientific and technical work on disaster risk reduction and its mobilization through the coordination of existing networks and scientific research institutions at all levels and all regions, with the support of the United Nations International Strategy for Disaster Reduction’s Scientific and Technical Advisory Group [9], in order to strengthen the evidence base in support of the implementation of this framework; promote scientific research of disaster risk patterns, causes and effects; disseminate risk information with the best use of geospatial information technology; provide guidance on methodologies and standards for risk assessments, disaster risk modelling and the use of data; identify research and technology gaps and set recommendations for research priority areas in disaster risk reduction; promote and support the availability and application of science and technology to decision-making; contribute to the update of the terminology on disaster risk

reduction; use post-disaster reviews as opportunities to enhance learning and public policy and disseminate studies [10].

In this paper, we will discuss Priority (4) of the Sendai Framework and explain how we have been able to do this priority with a practical project and on the ground. Priority (4) of the Sendai Framework states:

Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction [11].

It is clear that the United Nations is emphasizing increased preparedness and pre-disaster preparedness.

The steady growth of disaster risk, including the increase of people and assets exposure, combined with the lessons learned from past disasters, indicates the need to further strengthen disaster preparedness for response, take action in anticipation of events, integrate disaster risk reduction in response preparedness and ensure that capacities are in place for effective response and recovery at all levels.

Disasters have demonstrated that the recovery, rehabilitation and reconstruction phase, which needs to be prepared ahead of a disaster, is a critical opportunity to “Build Back Better”, including through integrating disaster risk reduction into development measures, making nations and communities resilient to disasters.

The term "Build Back Better" refers to the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment.

Our Disaster is Man – Made

This is a human catastrophe that has affected part of our country (Iraq), which is dominated by the terrorist groups called Daish (ISIS) on to parts of the northern and western parts of Iraq, where they destroyed life and destroyed the various kinds of heritage (manuscripts, relics, monuments, ancient carvings, etc.).

ISIS is a militant organization that emerged as an offshoot of al Qaeda in 2014. It quickly took control of large parts of Iraq and Syria, raising its black flag in victory and declaring the creation of a caliphate.

The UN designates ISIS responsible for human rights violations and war crimes. Amnesty International Organization indicts it of "ethnic cleansing." According to UNESCO, which described the exposure of the libraries of Mosul city as "one of the most serious acts of destruction in the history of mankind".

ISIS destroyed one of the largest libraries in Iraq, University of Mosul library and took it as a military base, where they burned its assets, which included a large collection of rare books and precious manuscripts. Even they reached to the status of abjection that they use some of these rare invaluable collection as means of heating in winter time [12].

Because these works are obtainable in very limited copies, most of them have been completely destroyed and missing, especially ancient manuscripts and rare books. Here we wondered how it is possible to keep the remaining works if our country or any other country in the world is subjected to a similar terrorist attack! In other words, how can we preserve the works obtainable in the countries, which are the gist of efforts of their thinkers, writers, litterateurs and scientists in case of disaster? Whether natural disaster or man-made? The answer was present at a public library in Iraq called the library of Al-Abbas holy shrine in the middle of Iraq, in Karbala city, about 105 km from Baghdad. Through establishing a project called the Iraqi scientific assets preservation.

Project of Iraqi Scientific Assets Preservation (ISAP)

The basic idea of this project is to convert old Iraqi hardcopy documents, which are obtainable in the local and central libraries, into digital copies, free of charge, using special methods in a global specification compatible with OCR. The library of Al-Abbas holy shrine has took it upon itself to carry out this national project. The process of digitization included nine stages of 27 steps. In this research we will not discuss the details of the conversion and the devices used, the techniques and software prepared for this purpose, but we will review the most important benefits of the project.

After converting hardcopy documents into digital format we will achieve the following:

- The possibility of storing documents on small-scale storage devices. Therefore, it is possible to save thousands of hardcopy documents that take large geographical area in storage media carried in one hand.
- Protecting assets from damage they may expose to either natural factors such as humidity, insects, aging of papers, inks, misuse, poor storage, and also protections from symptoms that may affect paper products such as fires or drowning.
- Disaster protection, whether natural or man-made (this is the point of our research), when hardcopy documents convert into digital format, they will be saved in a storage media and then the process of making multiple copies of them goes easily. Special copies of disaster back up devices are saved to guarantee data protection in the long run (tens or hundreds of years). They are also stored in special cases that are resistant to changing climatic conditions (high and low temperatures and humidity). They are also resistant to fires, floods and earthquakes (Picture 1).



Picture(1): special storage cases

In order to provide maximum protection for these documents, from both natural and man-made disasters, these cases are stored in many places, geographically distant from the workplace. If this place is subject to a natural disaster (flood, earthquake, etc.) or a terrorist or subversive attack (as in our study, when the library of Mosul was subjected to a terrorist attack), it is possible to turn again to these distant copies and restore all of the assets to the library or institution that digitized its assets after reconstructing the building.

Conclusion

Due to the evolution of means of sabotage steadily with the passage of time, we find that we have to take better methods to preserve the libraries assets as they are not easy to be compensated. We have seen that one of the most important and best of these methods is digitization as it could be stored digitally in a prepared media for this purpose and distributing digital copies to multiple places.

Through the digitization process of intellectual works, the Sendai framework for disaster reduction is achieved to set a limit to disasters by reducing the amount of losses through providing true electronic copies of hardcopies instead of being in a state of damage or missing the original copies of various types of assets (manuscripts, rare books, old maps, theses, treatises, etc.). The Sendai framework, priority No.4 has also been achieved through preparedness and readiness to disaster before it occurs. As well as a practical application of the concept of "Build Back Better" by placing back the digital copies to the libraries and institutions that digitized their assets after the disaster. This is an important measure to reduce disaster by regaining of what has been destroyed. Here are also must pay attention to that we have dealt with the negative effects of the disaster before it occurs instead of dealing with its consequences.

In most of the researches and studies related to "Forward thinking to lessen the effects of disasters," that focused on what libraries do to make construction more resilient and resistant to many conditions, such as protecting the collections in case of flood or fire break out. Most of the preventive measures used by libraries provide an opportunity to preserve their own buildings and provide a series of proactive steps to protect libraries from damages happen to the building.

Recently, there are many initiatives by libraries to advance disaster plans. But the most demanding problem is how to support proactive behaviour through Preserving assets pre-disaster, not post-disaster. This is what has explained in our research.

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