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THE NATIONAL AND UNIVERSITY LIBRARY OF SLOVENIA PROTECTION AND RESCUE PLAN

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Abstract:

In February 2023, a working group at the National and University Library of Slovenia (NUK) completed the first draft of the Protection and Rescue Plan. This document is the library's inaugural disaster management plan specifically focused on safeguarding library materials. It takes into consideration potential threats at NUK and its surrounding environment and aligns with the existing municipal and national emergency plans. The plan was developed in accordance with the IFLA Principles for the Care and Handling of Library Materials, ISO standards on collection management, the Slovenian Law on the Protection of Cultural Heritage and Fire Safety Law, as well as selected disaster and emergency plans from European and North American libraries.

The Protection and Rescue Plan encompasses a comprehensive assessment of risks associated with various disasters, implementation of preventive measures, preparedness protocols, immediate response strategies, and post-disaster damage mitigation. The risk evaluation follows the ABC risk management approach developed by Michalski and Pedersoli to the preservation of cultural heritage. Additionally, the plan includes staff organization and response guidelines for potential disasters such as fires, earthquakes, flooding, as well as threats posed by humans, such as cyberattacks and vandalism.

The development of the Protection and Rescue Plan necessitated a thorough analysis of the situation at NUK. This process has highlighted numerous unresolved questions and issues that NUK should promptly address to effectively mitigate all potential risks. Simultaneously, it presented an opportunity to review existing procedures and outline potential scenarios in the event of a disaster.

Keywords: disaster plans, national libraries, Slovenia.

1. Introduction

In 2021, the National and University Library (NUK) adopted the Guidelines for the protection and preservation of library materials.¹ These Guidelines encompassed all processes aimed at safeguarding and preserving both physical and digital library collections for the future. The document follows the functional model of the OAIS (Open Archival Information System) and outlines the current practices from the ingestion of materials to their archiving, preservation, and access within NUK's holdings.

The Guidelines incorporate existing standards in the field of preservation and conservation and provide recommendations for further actions, as well as the adoption of plans and strategies, to ensure the preservation of the written cultural heritage housed in the library. One of the plans to be adopted was the Protection and Rescue Plan.²

Previously, NUK had already implemented partial plans focused on the protection and development of their collections. These plans addressed specific scenarios such as handling valuable materials during exhibitions, external digitization processes, or providing brief instructions for the evacuation of library materials. Most of these plans and instructions were directed at staff members, including the Staff Evacuation Plan, Fire Regulations³, and others.

At national level, several emergency plans for different natural and artificial disasters were adopted and presented in the document National Rescue Plans for Protection and Rescue in Case of Different Disasters.⁴ Additionally, the City Municipality of Ljubljana and the national civil society have prepared documents to protect and safeguard people, such as the Decree on Protection against Natural and Other Disasters in the City Municipality of Ljubljana⁵, among others.

All mentioned documents are focused on safeguarding people. In case of damages or destruction of cultural heritage artefacts the aforementioned plans advice to coordinate evacuation and/or other necessary actions with the Ministry of Culture.

For a long time, we have been aware that a special disaster plan was needed for the library collections. In October 2019, Jeanne Drewes, a former expert from the Library of Congress, organized a workshop on disaster planning in Ljubljana. It was somehow the starting point of our disaster plan. In September 2022, a working group was assigned, consisting of seven members: the representative of old collections, Head of Acquisition, Head of Technical maintenance service, Head of Conservation, Archivist, Lawyer, and Head of the Research Department. The main goal of the working group was to prepare a Rescue and Protection Plan for NUK collections.

We reviewed emergency or disaster plans of other institutions abroad. United States universities have highly pragmatic emergency plans that include infographics and provide clear instructions and actions for different types of disasters.⁶ In Europe, such plans are less

¹ Smernice za varovanje in trajno ohranjanje knjižničnega gradiva v Narodni in univerzitetni knjižnici (2021)

² Načrt za zaščito in reševanje v Narodni in univerzitetni knjižnici (2023).

³ Požarni red (2020), Ocena požarne ogroženosti (2012)

⁴ Državnimi načrti zaščite in reševanja ob različnih nesrečah (2005, 2010, 2020)

⁵ Odlok o varstvu pred naravnimi in drugimi nesrečami v Mestni občini Ljubljana (1997)

⁶ This is the case of Michigan State University Libraries, Syracuse University, University of Washington Libraries, Amigos Library Services, Hamburg Public Library, New York)

common, but we found something similar at the German National Library.⁷ We believe that other libraries also have such a document, although it may not be publicly accessible. Typically, the disaster plan is part of the conservation and preservation activities.

In addition, we consulted different standards, among others: ISO 11799:2018,⁸ ISO/TR 19814:2017,⁹ and ISO/TR 19815:2018¹⁰ in order to get more information on the optimal conditions for storing and archiving library collections. At the same time, we read in detail the Slovenian regulations dealing with the movable cultural heritage, such as: Librarianship Act¹¹, Law on the protection of cultural heritage¹² and Law on the Protection against Fire.¹³

The most important guidance document for our Protection and Rescue Plan was the IFLA Principles for the Care and Handling of Library Materials (1999; IFLA načela ..., 2005)). The document is very useful regarding different phases planning. However, we did not follow the recommended structure, but we used some of the recommendations.

Our Protection and Rescue Plan was structured as follows:

- Risk identification – Types of risks that could endanger NUK's collections.
- Risk assessment – We tried to assess the risk of every location and collection at NUK. We used the ABC method of Michalski and Pedersoli.
- Disaster prevention – How to prevent damages and destruction of library collections in advance.
- Disaster response – What are the immediate actions when a disaster occurs.
- Damage mitigation – How to save the library collections after the disaster.

In the following chapters, we describe our experiences in the disaster planning process.

2. Risks identification

First of all, we needed to identify all the risks that endanger NUK's collections. The most common risks detected in libraries are fires, flooding, and other potential risks such as theft, vandalism, terrorism, cyber attacks, biological and chemical attacks, and war. Slovenia has a low crime rate, and according to the Global Peace Report 2022 (2022), it ranks 7th among the safest countries in the world. However, we should keep in mind that exceptions can occur, and we need to anticipate scenarios for each possible risk.

NUK's library consists of two locations. The main building in the center of Ljubljana is the most valuable monument designed by Slovenian architect Jože Plečnik. It was built in 1941 as a library and is protected as cultural heritage. This complexity makes emergency planning

⁷ Emergency management plan: https://www.dnb.de/DE/Professionell/Erhalten/erhalten_node.html

⁸ ISO 11799:2018: Information and documentation – Document storage requirements for archive and library materials. (2018). Geneva: ISO.

⁹ ISO/TR 19814:2017: Information and documentation — Collections management for archives and libraries. (2017). Geneva: ISO.

¹⁰ ISO/TR 19815:2018: Information and documentation — Management of the environmental conditions for archive and library collections. Geneva: ISO.

¹¹ Zakon o knjižničarstvu (Uradni list RS, št. 87/01, 96/02 - ZUJIK in 92/15; ZKnj-1)

¹² Zakon o varstvu kulturne dediščine (Uradni list RS, št. 16/08, 123/08, 8/11 – ORZVKD39, 90/12, 111/13, 32/16 in 21/18 – ZNOrg)

¹³ Zakon o varstvu pred požarom (Uradni list RS, št. 3/07 – uradno prečiščeno besedilo, 9/11, 83/12, 61/17 – GZ, 189/20 – ZFRO in 43/22)

more challenging because we have to protect not only the collections but also the building itself.

One of the biggest risks in Ljubljana, as well as in all of Slovenia, is earthquakes. Approximately every hundred years, Ljubljana suffers from devastating earthquakes. The last one occurred in 1895 with a Richter magnitude of 6.1 and a maximum Mercalli Intensity of VIII–IX. The old centre of the city, within an 18 km radius, experienced the most significant damage. Seismologists forecast the possibility of a similar earthquake occurring again.

Although the main library building is located about 50 meters away from the Ljubljanica River, it has never been flooded in this part of the city. However, flooding could occur in certain areas due to leaking water taps or human errors. There is also a possibility of fires. Both leaks and fires could happen as a consequence of earthquakes or human errors.

Once we listed all the potential risks and envisioned different scenarios, we needed to conduct a risk assessment.

3. Risk assessment and disaster prevention

3.1. Risk assessment

The risk assessment of NUK collections was based on the ABC method developed by Stephan Michalski, Canadian Conservation Institute - CCI, and José Luiz Pedersoli Jr., International Centre for the Study of the Preservation and Restoration of Cultural Property – ICCROM (Michalski and Pedersoli, 2016; Vodopivec Tomažič and Deniša, 2012). According to the ABC Method risk is defined as "the possibility of a loss of value to the heritage asset."

The goal of the risk assessment is to determine the likelihood of damage caused by a disaster, the level of damage, and its frequency. To achieve comprehensive risk management, it is necessary to follow the following steps:

1. **Establish the context:** This stage involves gathering information about the internal and external organizational environment, the premises where the collections are kept, and the condition of the collections and their protection.
2. **Identify specific risks:** Name and describe each specific risk.
3. **Analyze the risks:** Quantify each specific risk, split or combine specific risks as needed, and review and refine the analyses.
4. **Evaluate risks:** Compare risks to each other, to criteria, and to expectations. Evaluate uncertainty, constraints, and opportunities.
5. **Treat risks:** Identify risk treatment options, quantify and evaluate risk reduction options, and plan and implement selected options.

After identifying all possible risks, we listed the agents of deterioration and assigned three types of occurrences to each of them (Table 1).

Table 1. Example of agents of deterioration and their effects according to Michalski.

Agents of deterioration	Effects
Physical force 1	Damages on the collection caused by earthquakes
Physical force 2	Damages on the collection caused by handling or physical accidents in the library
Physical force 3	Damages on the collection due to lack of maintenance
Fire 1	Destruction of the whole library building
Fire 2	One collection department destroyed by fire
Fire 3	A small section of the department destroyed by fire
Water 1	Flooding in the library building caused by water tap leaking
Water 2	Roof leaking
Water 3	Mold development due to humidity
Pollution 1	Pollution caused by ecological disaster
Incorrect temperature 1	Chemical deterioration of paper caused by high temperatures

On behalf of each agent of deterioration (physical force, fire, water ... etc.) we can assess the possible risks according to the following scale (Table 2):

- Highly endangered: ***
- Moderately endangered: **
- Slightly endangered: *
- No danger: /

Table 2: Example of risk assessment according to Michalski

Agents of deterioration	Risks	Objective assessment
1. Direct physical force	Library building destruction	*
	Library material handling	***
2. Thieves and vandalism	External thefts	**
	Internal thefts	*
3. Fire	Short circuits	*
4. Water	Roof leaking	**
	Flooding of Ljubljana River	/
	Damaged water taps leaking	**
5. Pests	Mice, insects ...	*
6. Air pollution	Exhaust gases and dust particles	**
7. Light, ultraviolet and infrared	Artificial light	*
	Natural light	*
8. Incorrect temperature	High temperature	**
9. Incorrect humidity	High relative humidity	**
10. Lost or stockpiling	Unknown location of the library item	*

For measuring the risk Michalski and Pedersoli (2016) use two fundamental components: frequency and consequence.

Concerning frequency, it is important to determine:

- **A score:** How often will the event occur?

There are three possibilities: rare, occasionally, and frequent /cumulative processes.

Regarding consequence, there are three questions that need to be answered:

- **B score:** How much value will be lost in each affected collection?
- **C score:** How much of the collection is affected?
- **MR score:** What is the magnitude of the risk?

The magnitude of the risk is equal to the sum of the ABC scores (**MR = A+B+C**).

For each score there is a scale of four values: 0, 1, 2, and 3. The higher the value, the higher the magnitude of the risk, and vice versa. Based on the sum of scores, we can assess the level of danger for each risk and prioritize accordingly (Table 3).

Table 3. The magnitude of risk scale with implications

Magnitude of risk	General implications of the range	Potential lost	Causes
10-9	Extreme priority	Possible loss of the entire collection	Fire, earthquake, water leaking, frequent handling
8-6	High priority	Possible damage or loss of significant part of the collection	Ultraviolet and infrared light, humidity
5-4	Medium priority	A very rare possibility of loss	Library material handling
3-1	Negligible priority	Regular maintenance level with small possibilities of damage	Rare use of library collection items

The risk assessment was the most challenging part of our planning endeavor, and we had to repeat it twice because the first time, we missed the first step: Establish the context. Initially, we relied on the observations of the working group members, but we soon realized that the input from each collection's stewards was missing. As a result, we visited each collection's premises, documented, and assessed all risks and possible scenarios.

3.2 Disaster prevention

The risk assessment helped us identify the vulnerable areas in our special and other collections in the library. Taking into account the potential risks and scenarios, we prepared instructions for preventing or minimizing the damage caused by each anticipated risk. We also established priorities for premises maintenance, staff behavior, and collections management. We recommended conducting alarm tests at least once a year among all staff in both buildings and presenting the Protection and Rescue Plan to all NUK staff members.

Another recommendation was to involve collection stewards in the evaluation and risk assessment of their own collections. They should be aware of where the most valuable items of their collection are kept and should identify specific risks related to the type of collection and storage conditions. They should know whom to report any changes or new risks that could affect their collection. So far, the cooperation between special collections stewards, conservators, and restorers has been very successful.

4. Disaster response and collection damage mitigation

4.1 Disaster response

The chapter on disaster response in NUK's Protection and Rescue Plan was the most demanding. We formed a Disaster Response Group and assigned responsible staff members. In this section, we analyzed emergency and disaster plans from other libraries to find optimal ways of response and evacuation. The evacuation plans were enhanced with the locations of safety and response equipment within the library building. Creating a list of equipment and materials required in case of a disaster took a significant amount of time. For each type of risk, we created an infographic intended for reproduction in each collection department. An example can be seen in Figure 1.

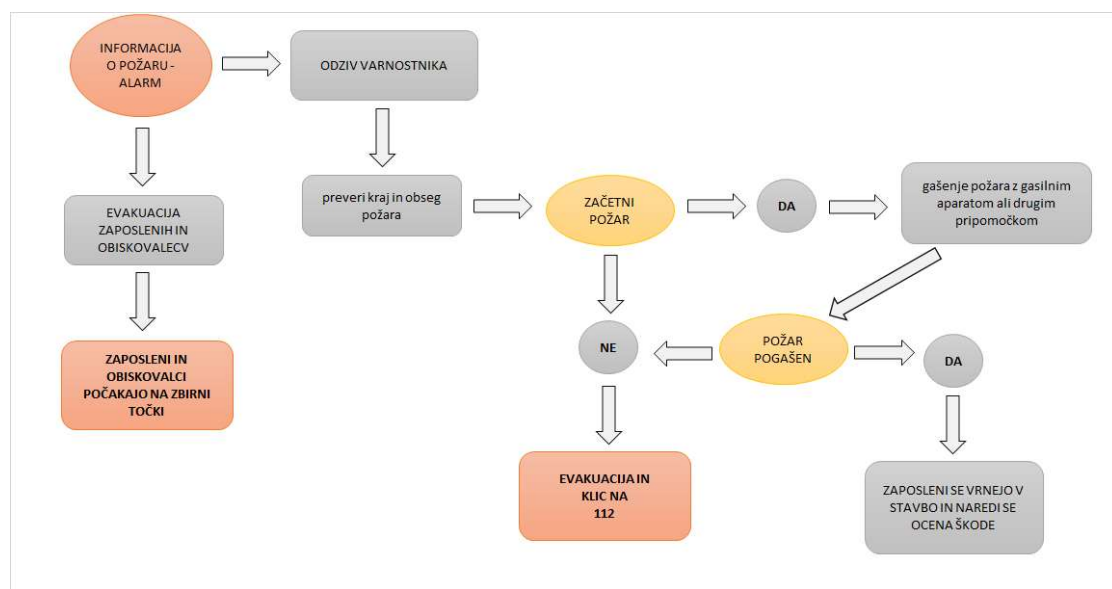


Figure 1. Infographic with the steps how to proceed in case of fire (Author: Mateja Nučič)

4.2 Disaster damage mitigation

The next phase is disaster damage mitigation, which involves assessing the magnitude of the disaster and developing a rescue plan. Different types of disasters require different actions. Proper handling of damaged collections can significantly mitigate their damage, and the involvement of our conservator in the working group proved to be immensely helpful. It is also crucial to assign relevant responsibilities to staff members in handling library materials. For certain types of risks, we prepared infographics that outline the decision-making steps in the event of a disaster. Additionally, we highly recommend preparing a comprehensive report on the effects of the disaster on the collection, for which we have developed a dedicated form. We have also decided to provide additional instructions and guides to the conservators to facilitate their decision-making during urgent situations.

Finally, we have compiled a list of urgent and necessary improvements to protect our collections at NUK and prevent significant damage. Most of the risk assessment analysis and recommendations are confidential, and the Protection and Rescue Plan is pending approval by NUK's management.

5. Some recommendations

The preparation of the Protection and Rescue Plan took eight months of intensive work. We conducted a thorough literature review and sought to learn from other libraries' experiences. Initially, we were hesitant about whether to follow existing disaster/emergency plans, ISO standards, or other guidelines. The IFLA Principles for the Care and Handling of Library Material (1999) provided a clear framework and structure that we decided to follow, and we recommend it to libraries that are starting the development of a Disaster Plan.

It is essential to communicate with collection stewards and/or special collections' heads about the possible risks to their collections. In order to receive valuable feedback from them, they need to understand the importance of the Plan. Additionally, they can propose new ideas regarding the protection and safeguarding of the collections.

The first draft of the document was quite lengthy. We noticed that many instructions or guides were repeated for different types of disasters. Following the principle of "less is more," we made efforts to simplify it as much as possible to facilitate the reading of the Plan.

The infographics are crucial as they are easier to remember and provide a clear decision tree when time is limited for responding to a disaster.

The risk assessment of special collections was the most time-consuming task. Nevertheless, it was a valuable experience as it allowed us to analyze the condition of all our collections and raise awareness among the staff. The knowledge gained from this experience will be used to enhance the protection measures for our collections.

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