

Disaster Drill for Removing Museum Objects under the Assumption of Flooding

수해를 가정한 박물관 자료의 긴급 반출 훈련 / 水害を想定した博物館資料の緊急搬出訓練



Online Access

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Introduction

- In light of the risk of loss or damage to museum objects due to fires and natural disasters that occur frequently around the world.
- Sep. 2019, the Japanese Agency for Cultural Affairs issued "Guidelines for Fire Prevention".
- Dec. 2019, Kanagawa Pref. Museum of Cultural History (KPMCH: located close to the coast and has its main storage rooms underground) formulated "Plan for Emergency Removal of Objects in Emergency Situations Caused by Fire and Natural Disasters".
- Drill began in 2020, based on the plan.

About the Plan

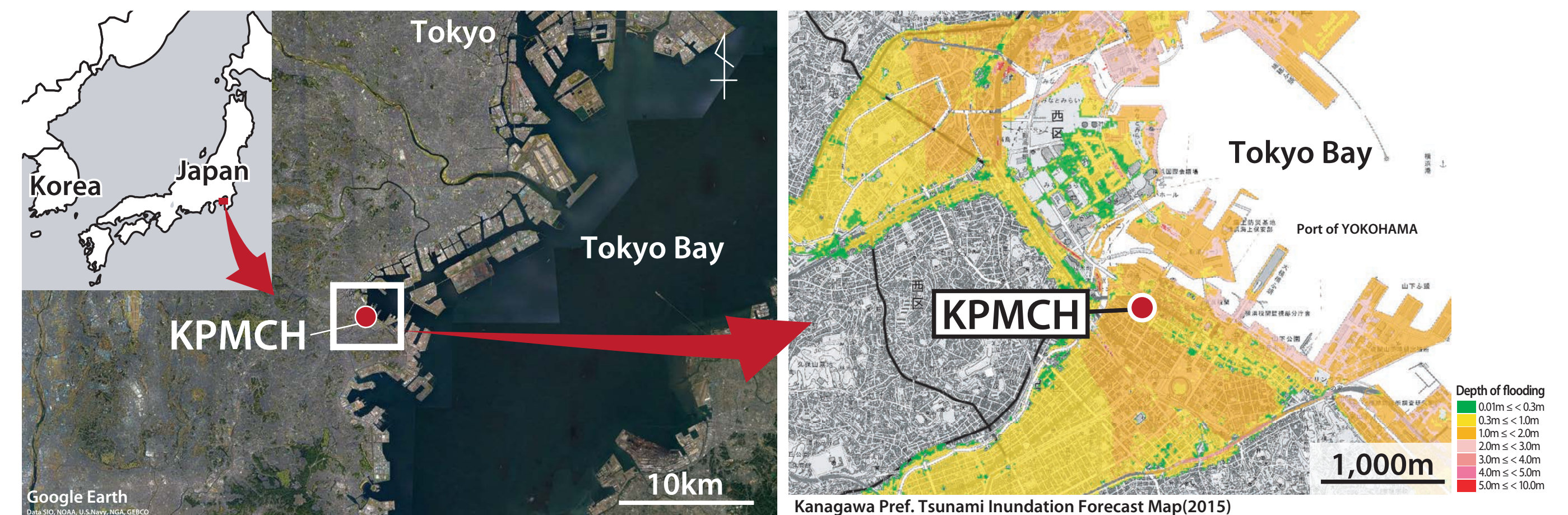
The plan defines the flow of emergency removal after a disaster occurs, the chain of command, temporary storage at the destination, restoration, preparations during normal times including the implementation of drills, priorities for removal, and materials and equipment to be used.

Outline of Drill

- Drills have been conducted under the assumption of flooding caused by typhoons.
- Prepare a list of items to be removed and a schedule in advance.
- Original and mock-up objects were used in the drill.
- The group was divided into two groups, one to remove objects from the basement and the other to receive them on the second floor, and carried them out while checking them against a list.
- The time required to remove the objects and the storage location were measured, and the amount of objects that could be removed in the event of an actual disaster was examined.

Prospects

Repeated drills have permeated the process of removal. However, this plan and drill are not perfect. In the future, the storages must be moved to a safer location. Nevertheless, no storage can prevent all disasters. The most important thing is to start little by little with what we can realistically cope with, while keeping an ideal in mind, and being well aware of the current situation and risks.



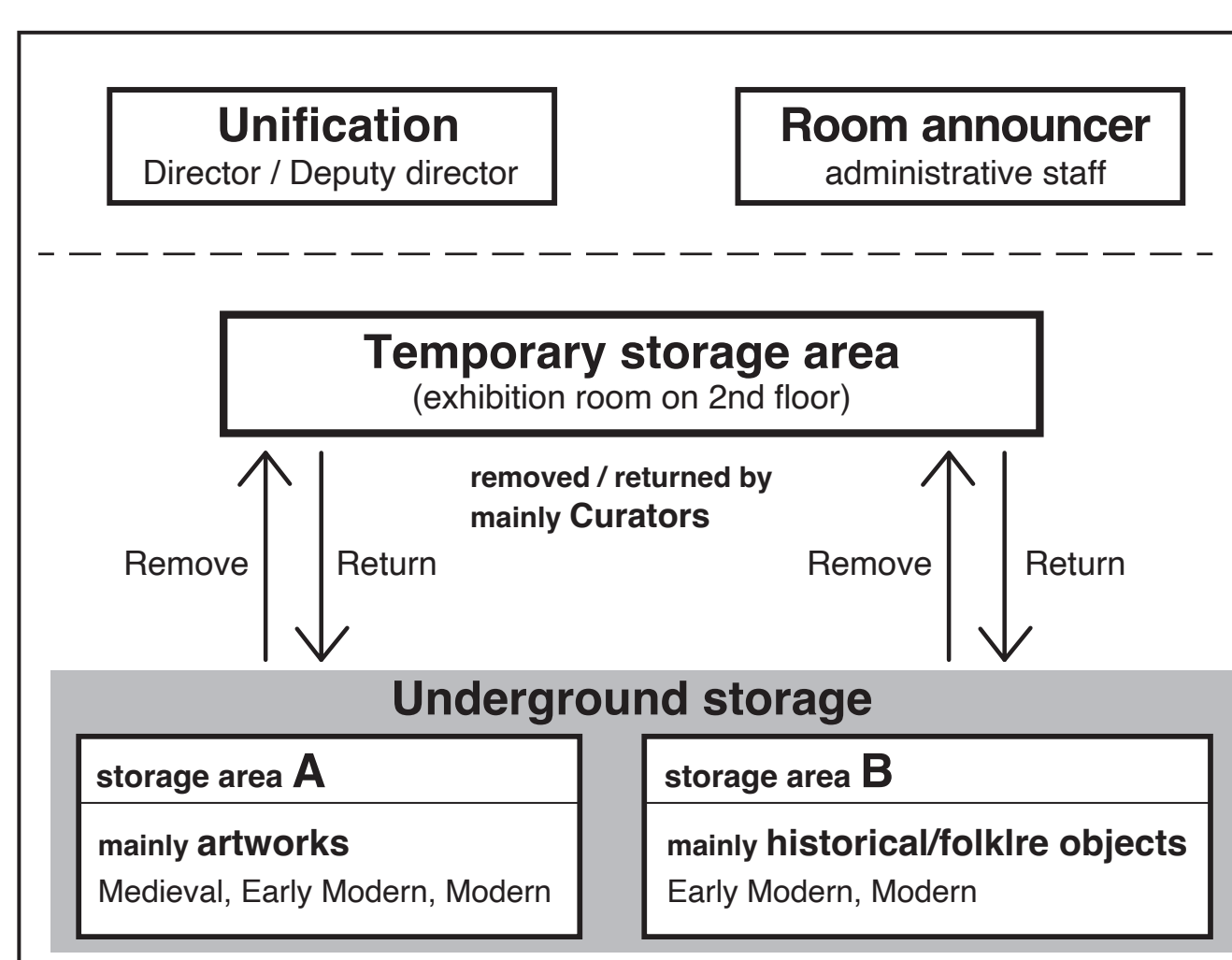
Location of KPMCH

Chapter layout of The Plan for Emergency Removal of Objects

- PURPOSE
- Positioning
- Oversight of Plan Implementation
- Common Considerations
- Removal in case of fire
- Removal in case of typhoons, torrential rains, tsunamis
- Priority of materials to be removed
- Management after removal
- Restoration, etc.
- Preparation for normal times (including "Annual drill")
- Review of the plan
- Appendix 1, 2 Priority of objects to be removed in 5 and 6
- Appendix 3 Criteria of priority
- Appendix 4 List of objects and equipment

	2020 Sep	2021 Dec	2022 Jan
Assumed disaster	Flooding due to large typhoon	Flooding due to large typhoon	Flooding due to large typhoon
Objectives	Confirmation and verification of plans	Plan penetration and improvement	Plan penetration and improvement
No. of objects	44 objects (inc.21 objects of mock-up)	84 objects (all original)	152 objects (all original)
Time	Group A [Remove] 36min [Return] 37min Group B [Remove] 49min [Return] 35min	Group A [Remove] 58min [Return] 64min Group B [Remove] 48min [Return] 55min	Group A [Remove] 41min [Return] 41min Group B [Remove] 61min [Return] 53min
No. of participants	15 persons Director/Deputy Director 1 each, administrative section staff 1, Curators 12	23 persons Director/Deputy Director 1 each, administrative section staff 4, Curators 17	23 persons Director/Deputy Director 1 each, administrative section staff 4, Curators 17
Note	<ul style="list-style-type: none"> First time training Assuming a typhoon of the same size as the actual typhoon in 2019 Verification of "how much can be removed in one hour?" Avoiding the expected flood depth + shortening the distance to be traveled → use the 2nd floor exhibition room as a temporary storage area 	<ul style="list-style-type: none"> Based on 2020 training Prepare manuals Add confirmation of the contact process for the removal decision. Storage shelf numbers and mock-up tags are installed. → Measures to ensure that anyone can identify materials to be removed Accepting visitors from related institutions 	<ul style="list-style-type: none"> Based on 2021 Dec. training The roles of the participants were switched from the previous training. Meetings are held before work begins Consciousness of staff to talk to each other Training for non-curatorial staff on the handling of objects was conducted. Based on previous training, large fans, dollies, curing sheets, etc. were purchased.

Conceptual diagram of the drill system



Comments from participants

- (2020) Non-curatorial staff should also participate in the training. Roles they can take on include information dissemination and gathering weather information.
- (2020) In case of an emergency, support from other departments is needed to carry out objects. It is advisable to consider the assignment of work in anticipation of such a situation.
 - ▷ **Response to requests:** The 2021 training includes tours and lectures by non-curatorial staff. Liaison with relevant government agencies is also included in the training.
- (2020) The organization needs to consider the criteria for decision-making and the timing of decisions.
 - ▷ **Response to requests:** The process of decision making has been included in the training since the 2021 training.
- (2021) Smaller carts are easier to handle than larger carts.
- (2021) Transporting with a flatbed truck may be dangerous because the front of the truck cannot be seen very well, depending on how it is loaded.
 - ▷ **Response to requests:** A medium-sized cart with handles was purchased in 2022.
- (2021) We need to review our daily preparations so that objects can be removed immediately.
- (2021) It would be good to have a checklist for loading/unloading with notes as well.
- (2021) Many of the boxes containing objects were heavy, and we were concerned that we would not be physically strong enough to remove them all out.
- (2021) The room should be well-lit when working.

2020 Sep.



Removing objects(mock-up)

2021 Dec.

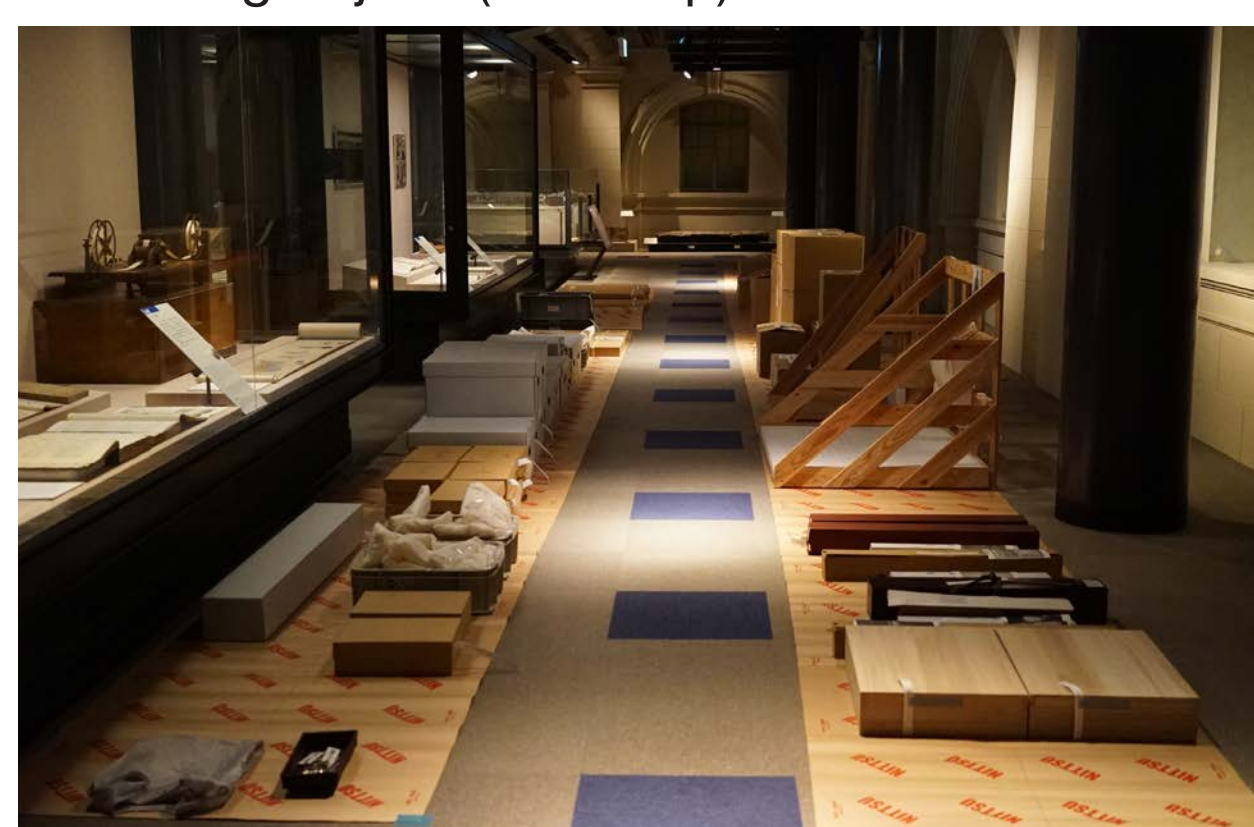


Removing objects(original)

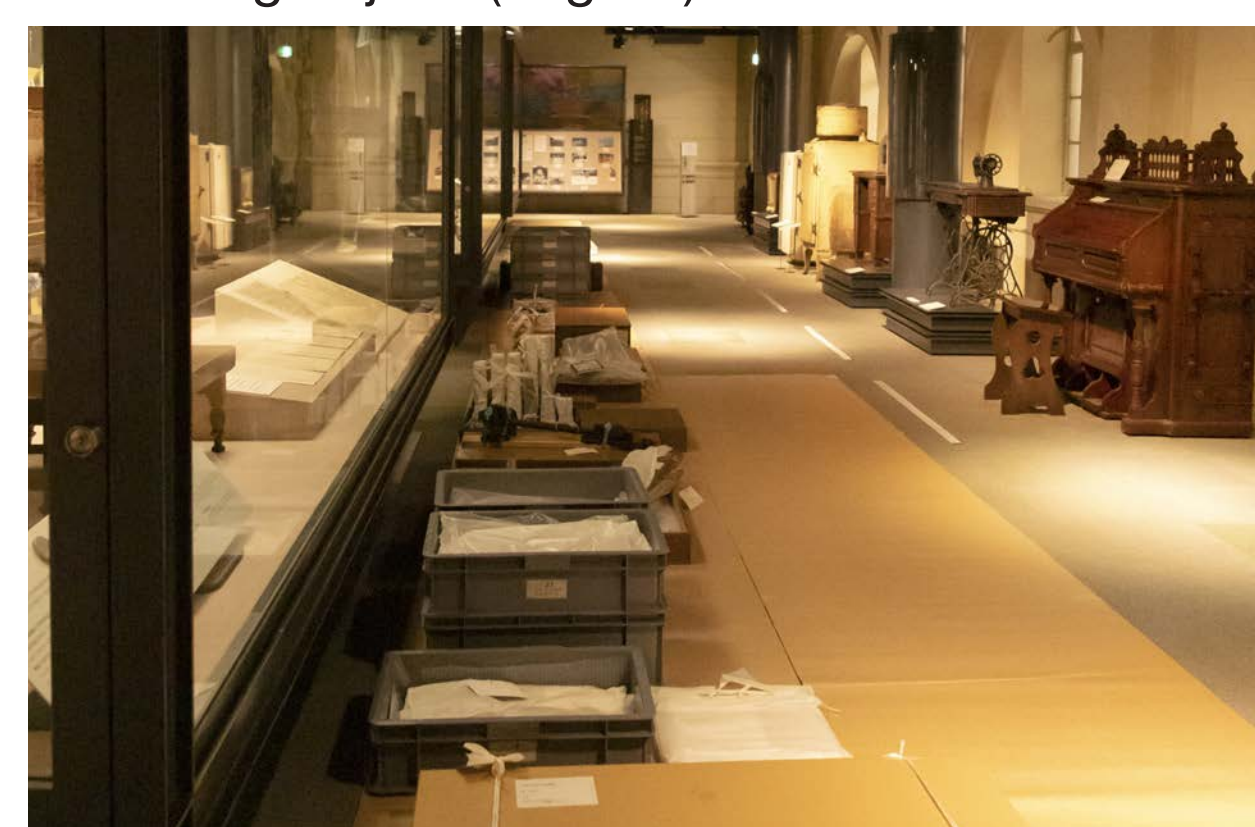
2022 Jan.



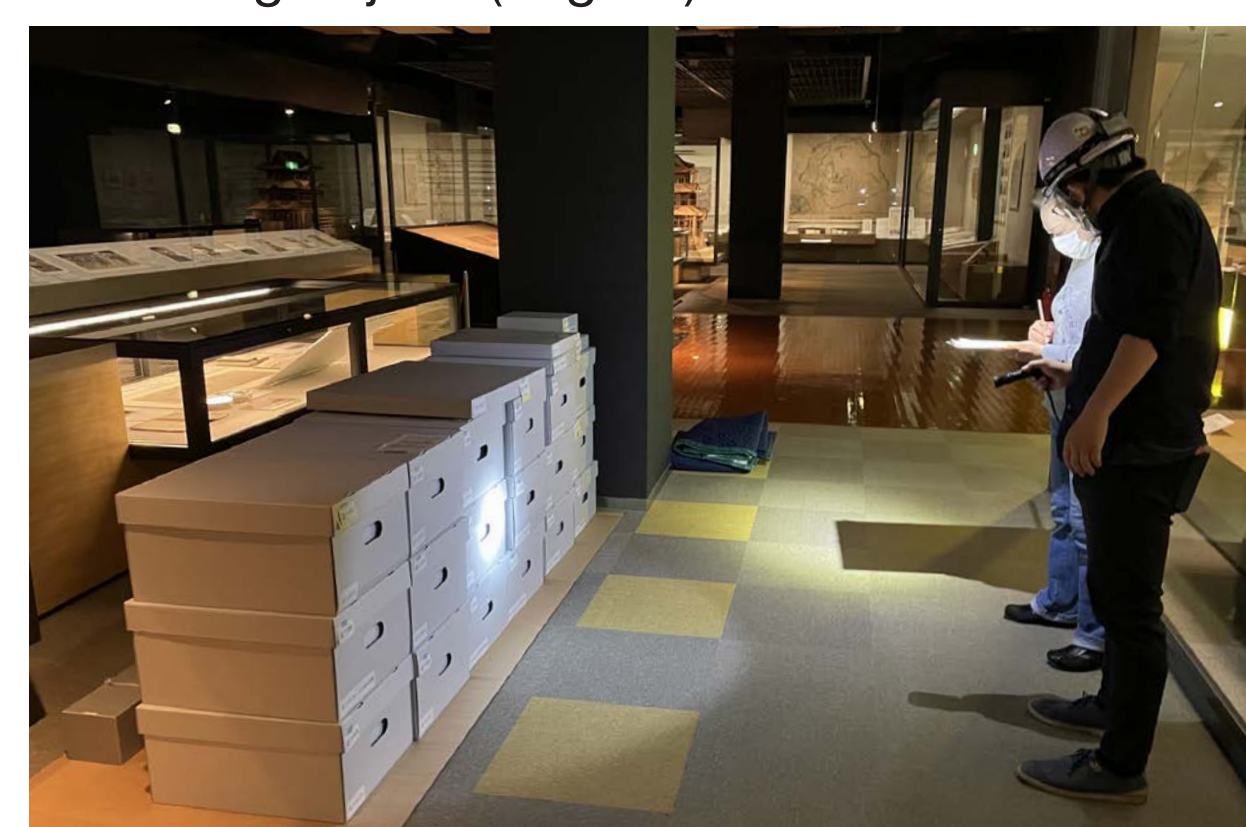
Removing objects(original)



Temporary storage situation(exhibition room on 2F)



Temporary storage situation(exhibition room)



Temporary storage situation(exhibition room)

Reference

TAKEDA, S., CHIBA, T., 2019. Practice and issues of drill for removing objects based on the assumption of flooding of storages facilities, *MUSEUM STUDIES*, vol.56 No.9, Japanese Association of Museums (in Japanese)