

# DISASTER RISK ASSESSMENT AND PREVENTION FOR INTANGIBLE CULTURAL HERITAGE (ICH)

INTRODUCING THE ACTIVITIES OF THE CULTURAL HERITAGE DISASTER RISK MANAGEMENT CENTER, JAPAN

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## INTRODUCTION

This report introduces the initiatives that the Cultural Heritage Disaster Risk Management Center, Japan is conducting to safeguard intangible cultural heritage from natural disasters, with an aim to clarify the tasks that are necessary to nurture the ability of people to hold traditional rituals, festivals, and events, and to maintain and develop inherited craftsmanship in areas that suffer from natural disasters, to overcome the effects of damage, resume the traditions, and withstand future disasters.

In Japan, historical and cultural artifacts existing in the country are protected by federal legislation called the ‘Act on Protection of Cultural Properties’, and by prefectural and municipal ordinances. Intangible cultural artifacts are also positioned in the given domestic systems and have been protected by various measures. These intangible cultural properties are called ‘Intangible Cultural Heritage’ (ICH) under the Convention for the Safeguarding of the Intangible Cultural Heritage of UNESCO.

ICH consists mainly of human activities, and therefore, different types of tactics from those for tangible heritage protection are needed to enable these measures to cover the whole range of ICH. The same applies to disaster prevention and responses for ICH. However, the necessary tasks for safeguarding ICH against disasters had not been sufficiently organized or standardized in Japan, while the particularities and difficulty of their safeguarding have been pointed out.

The Cultural Heritage Disaster Risk Management Center, Japan (‘the Center’) was founded under the Secretariat of the Independent Administrative Institution, the National Institutes for Cultural Heritage (NICH) in October 2020 to protect all historical and cultural artifacts in Japan from any natural disasters, including ICH. Therefore, the Center has been developing measures to effectively prevent and mitigate damage to ICH caused by natural disasters since its foundation.

In 2021, the Center assembled ICH experts in Japan, set occasions to discuss disaster prevention for ICH, and reported the outcomes to the ICH communities, related parties, and researchers at a domestic symposium. The Center is also working to

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present methods to prepare for probable disasters through investigations on traditional rituals, festivals, events, and craftsmanship damaged by recent natural disasters. This report summarizes the progress of the Center's initiatives.

## IDENTIFICATION OF CHALLENGES

### Intangible Cultural Heritage (ICH) and Post-Disaster Recovery

The Great East Japan Earthquake of March 11, 2011, occurred mainly in the Tohoku region of Japan. Several cases were reported in which local communities in damaged areas started to take various actions to resume local rituals, festivals, events, and performing arts during stages in which lifeline utilities and/or usual living were not yet fully recovered. The attempted resumption of such ICH was reported as early as June 2011, around three months after the earthquake, at the timing of Buddhist memorial services for consolation of the dead in some areas (Imaishi, 2017) (Figure 1).

Traditional rituals, festivals, and events inherited in many areas all over Japan have three typical characteristics as follows: 1) they are held by communities and organized by local residents, 2) they have been passed down through generations, and 3) they create local unique rhythms as special non-ordinary days in ordinary life. For people who were forced into a state of emergency by the earthquake, the resumption of the festivals and events that they have inherited through generations is considered as a means to regain their ordinary life and community connections once lost in the disaster.

Based on studies of these cases after the Great East Japan Earthquake, a viewpoint that cultural events such as these local rituals, festivals, and events nurtured over accumulated time can contribute to the regional recovery from the disaster and, not only to recovery of ICH, has been shared. In the given context, the next challenge pertains to how the ICH can gain enough resilience to survive through the next natural disasters before they occur. If damage to ICH caused by natural disasters can be prevented or mitigated, the ICH can be resumed smoothly after a disaster, and can contribute to local recovery at an earlier stage.



**Figure 1**

*Mikoshi*, a portable shrine being carried through an area in which higher ground development was underway during reconstruction after the Great East Japan Earthquake.

(Photo: Hiromichi Kubota)

### **Difficulties in Preventing Effects of Disasters on ICH**

Effective measures to prevent damage to ICH have been discussed on various occasions, but their practical and actual examinations had not been fully conducted, as mentioned earlier. The characteristic that ICH constitutes heritage borne by people has bottlenecked solutions to the challenges.

According to the bearers of ICH damaged by the Great East Japan Earthquake, the appearance of damage varied among its regions and bearers. Despite similarities in the events themselves, different communities understood the damage differently and their paths to resume their events were different.

For example, while some communities could not resume their festivals because the necessary tools for the festivals were swept away by the tsunami, other communities managed to resume theirs using alternative tools. Some ICH could not be recovered to the original status because the coastal area where its performance had been held was severely damaged by the tsunami, even after the performers themselves were once again able to perform.

The communities that support ICH and regional conditions in which ICH is inherited determine what is considered as 'damage'. In addition, as the responses to the damage are left to the bearers' judgment, the situation of ICH after disaster and the means of resumption and reconstruction of ICH vary.

Moreover, ICH is hugely affected by big changes in people's lives because it is inherited along with local life. Therefore, impacts on ICH after disasters can appear over a longer time span than expected. Some ICH could neither resume nor continue after the earthquake because a large part of the population exited the area and substantial industrial changes progressed in the damaged areas.

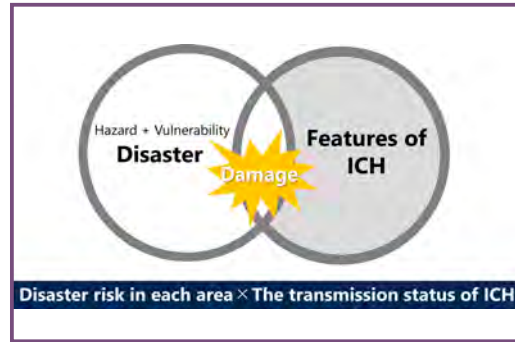
## **DISASTER PREVENTION FOR ICH**

### **Hazard Risk and its Visualization**

Natural events that trigger disasters are not the only factors that determine the resulting damage. Vulnerabilities in the societies hit by disasters also constitute important factors (Tatsuki, 2016). The potential impact of damage by disaster is usually calculated by multiplying the natural hazard (external factor) by the vulnerability of society (internal factor) (Figure 2). Damage to ICH can further differ for various items and status according to the type of heritage (Figure 3). This is why damage can appear very differently depending on the actual situation of the respective type of heritage. By considering both natural disaster risks and the situation of each type of ICH, crisis that may be faced by ICH at the occurrence of disaster can be estimated in advance.



**Figure 2** How we view disasters



**Figure 3** Damage inflicted on ICH

In the given situation, how should we classify the situations of ICH and prepare for the risks? It appears mandatory to first organize the factors that comprise ICH. To understand this, we may consider the example of ‘Yama, Hoko, Yatai, float festivals’<sup>3</sup> and look further into details.

In the case of ‘Yama, Hoko, Yatai, float festivals’, the first factor to consider is the engagement of various related parties. *Ujiko* communities (people who worship the festival patron shrines) are the central party that conducts the events. In addition, Shintō priests who conduct rituals, and even spectators are important supporters although the involvement is rather peripheral. Spectators can motivate the event bearers to carry on the festivals even though the spectators neither perform the festival rites nor are the main subjects.

To conduct the events, tools, not only the main constructs such as Yama, Hoko, and Yatai floats, but also others such as *mikoshi* (portable shrines), ritual utensils, offerings put on the alters, and costumes are indispensable. In addition, places including event-related facilities and spaces in which the rituals are conducted, such as shrines and the streets over which the Yama, Hoko and Yatai are pulled around, are also among the basic factors constituting events.

The other basic factor to consider is the ‘occasion’. This factor includes not only occasions such as the day of an event but also occasions for preparation, practice, cleanup after the event, and discussion. In the first place festivals cannot be conducted unless their bearers agree to conduct them during the current year and prepare for them. Once a festival is over, the bearers continue to hold discussions and begin to arrange for the next year’s festivals. This series of occasions enable festivals to be inherited.

3 ‘Yama, Hoko, Yatai, float festivals in Japan’ is listed as World Intangible Cultural Heritage. In 2016, its inscription on the Representative List was decided at the 11th session of the Intergovernmental Committee under the Convention for the Safeguarding of the Intangible Cultural Heritage of UNESCO. These float festival events are ritual events practiced as prayers for peace and protection from natural disasters for the local societies by holding a procession of the constructs ‘Yama, Hoko, Yatai’.



**Figure 4**  
Estimating disaster risk

‘Occasions’ do not only determine the way current festivals and performing arts are held. Through these occasions, members share their experiences and time, and pass their knowledge of the events on to other members of the next generation. This shows that these occasions are indispensable factors to continue with the passage of festivals and performing arts to future generations. The efforts to contain the recent COVID-19 pandemic had significant impact on ICH with the loss of these ‘occasions’ considered to have been the largest. People’s efforts to avoid crowds to prevent infections deprived bearers of ICH of these occasions and forced traditions into crisis. This impact continues even now.

As explained above, the factors comprising ICH can be organized into four types: people (bearers), tools, places, and occasions (Figure 4). Until recently, the three factors besides people were often considered as sub-factors for each type of heritage because the characteristic of ICH as ‘intangible (people’s activities)’ had been overly stressed.

However, ICH cannot always be resumed when only the activities of the people involved can be assured. For example, some bearers have said, ‘we cannot resume the event without costumes’, ‘we cannot resume it because we lost our shrine’, and ‘we cannot even think about resuming it because there are no occasions on which to perform it’. ICH is based on the above four factors in complex and interconnected ways. This fact diversifies impacts on damaged ICH and the pathways to resumption as its background.

For disaster prevention for ICH, it is required to specifically organize the factors constituting each type of ICH and visualize risks for each factor. It is also important to clarify how each factor supports the inheritance of ICH, in other words, how bearers understand and grasp each factor.

### **Responding to Expected Vulnerabilities**

By working on the tasks identified in the previous section, risks of damage to ICH by natural disasters can be specifically clarified to fit the actual situations. Through the work of organizing each factor, potential vulnerabilities that each factor may include can be clarified; for example, potential effects of disaster risks on the locations of

shrines or temples where rituals, festivals, and events are held, the venues where local communities assemble, and the warehouses where tools are stored; impacts of loss or damage to tools; and occasions on which the local communities bearing ICH can gather and discuss. Once these vulnerabilities are identified, solutions (disaster prevention methods) can be presented.

We need to be careful to understand that there are two types of vulnerabilities: those which can be addressed and those which cannot. For example, when a warehouse for tools is estimated to be at very high risk of flood by rainfall, the most effective solution is its relocation to a safer place to prevent damage. However, it can be difficult to implement the best solution due to community situations and bearers' feelings such as, 'we have kept the tools there for a long time', or 'it will be inconvenient for practice if the tools are moved to another place'.

In the given situation, an alternative solution needs to be discussed, such as moving tools to the second floor of the same warehouse without its relocation. If it is difficult to even implement the alternative solution, it would be necessary to discuss how to accept the damage that might occur, and how to reconstruct any damaged tools after the event of a disaster.

In many cases it is effective to handle the hardware side to prevent damage due to disaster, such as facility relocation or renovation. However, it can be difficult to do so within the single framework of the existing cultural property protection system. For example, when a shrine at which a ritual, festival, or event takes place is located in a landslide hazard zone<sup>4</sup>, the most effective countermeasure is to relocate the shrine itself. However, as the location of such a facility is deeply tied to the local history, it is not easily relocated. Obviously it is not realistic to change the place for offerings either, considering event preservation. In that situation civil work can be done in the area to reduce landslide risks. Even so, it is necessary to work in alignment with wider initiatives for general disaster prevention, not only within the cultural property protection system.

The important point here is, not to seek responses to all vulnerabilities, but for bearers and stakeholders after visualizing risks inherent in the ICH to discuss thoroughly and organize what can and cannot be eventually responded to, what can and cannot be immediately responded to, and what should be prioritized. Through this series of tasks, risks to be accepted can be visualized and possible responses after disaster can be evaluated substantially.

### **Roadmap to Resumption**

After organizing pre-disaster measures, responses after disasters can be organized sequentially as a flow. The tasks needed to resume ICH after a disaster are shown in Figure 5.

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4 Landslide Hazard Zones and Extreme Hazard Zones are the zones specified as having landslide risks by Prefectural Municipal Governors based on the Act on Sediment Disaster Countermeasures for Sediment Disaster Prone Areas.



**Figure 5**  
Disaster response flow

The first tasks necessary just after disaster occurrence are to ascertain the damage status and share the information among related parties. Confirmation of the safety of bearers and stakeholders and information on the damage status of tools and facilities are needed. It is also important to share the information among related parties. Correspondence after disasters can be smoothly conducted if the means of confirming people’s safety, ascertaining the damage situation, and sharing the information are discussed and decided beforehand.

The next step is to discuss when and how ICH will be resumed after the above information is shared. Depending on damage status, ICH may be resumed in its original form as before; however, if some damage occurred, it may be difficult to resume without any changes, whether the changes are made intentionally or not. Many factors require consideration: whether alternative ways should be adapted for the damaged aspects, and if so, what ways should be taken, and so on. Bearers and stakeholders need to understand the situation, and then to discuss and agree on a roadmap to enable resumption of the events.

The damage to be estimated here is not only the direct damage hitting ICH. As ICH is deeply tied to the lives of local people, it highly relies on how the people live. Therefore, psychological impacts, economic damage, and direct damage on lives that the bearers suffer from could lead to their decision not to resume the events or festivals for the time being. Even in that case, the burdens incurred by resuming the events in the future can be reduced if prospects can be shared among local communities.

Cases in the Great East Japan Earthquake show the following tendency: when communities could make a connection with cooperators and supporters outside of their areas at an earlier stage, they managed to resume the events at their preferred timing. That is, if bearers could share their situation outside of their communities, even during confusing situations just after disaster occurrence, they tended to be able to connect to support. On the other hand, communities who could not share the difficulties they were facing and could not raise their voices for support were left behind and experienced a more difficult path to resumption of events.

Therefore, one of the pre-disaster preparation measures to accept risks should be that of connecting with people outside of the local communities, such as with communities and associations of other bearers who inherit similar ICH, ICH bearers in the same regions, municipal government organizations in charge of cultural property protection in their regions and museums, libraries, universities, and research institutes handling historical matters. If stakeholders can report their damage status and prospects of resuming their events, appropriate timing and contents of support can be more easily identified. Construction of such networks and collaboration structures is one of the countermeasures that bearers and other stakeholders can prepare for in advance of disaster occurrence.

The last step is to achieve the ultimate goal of resuming events and performing them in the same way as before or in alternative ways. To continue events, not just temporarily resume them, again continuous discussion and effort among local communities are mandatory. Furthermore, if the stakeholders and bearers can discuss countermeasures to prepare for future disasters, they can overcome damage with more resilience and smaller burdens when future disasters happen.

## **DISASTER CASE STUDY OF TOKAKUJI NO MATSUE**

### **Overview of the Disaster-Affected Event and Investigation Background**

The tasks needed to effectively prevent the impacts of natural disasters on ICH, concluded by discussions in the Center, were described above. Here, a case study of one of our various disaster damage investigation outcomes is presented, that of *Tokakuji no Matsue*, a disaster-affected event that the Center is working on.

*Tokakuji no Matsue* is a traditional folk event passed down in the Tokakuji area of Kanda Town, Fukuoka Prefecture, located in the northern part of Kyūshū (Figure 6). The residents in the Tokakuji area are said to be descendants of *Shugenja* (practitioners of *Shugendō*, folk religious practices combining Shintō and Buddhism), who practiced around that area. *Tokakuji no Matsue* is conducted every year in early April by the residents to pray for good harvests and safety of the surrounding areas. A 12-meter pillar is erected at a shrine field located in the middle of a small hill, and the residents present performing arts to pray for good harvest around the pillar.

As the highlight of the event, a representative elected from the residents climbs the pillar, reads *kiganbun* (optative sentences), and performs *heikiri* to cut *nusa* (paper-made streamers used for Shintō prayers) carried on his back with a sword (Figure 7). The *heikiri* is a very important part of the event for the residents.

Heavy rain in August 2021 caused landslides in the area. The precise location where *Tokakuji no Matsue* is held was buried in the landslide sediments. This event was canceled in 2022 because the damage was too severe to easily reconstruct the area and the COVID-19 pandemic was widespread. The Center investigated the damage from February 2022 to April 2023 in response to information shared by the Board of Education of Kanda Town. The Center regularly checked the damage and reconstruction status on-site and interviewed the residents (bearers of the event) and





**Figure 6**  
*Tokakuji no Matsue*  
(Photo: Kanda town board of education)



**Figure 7**  
*Heikiri*  
(Photo: Kanda town board of education)

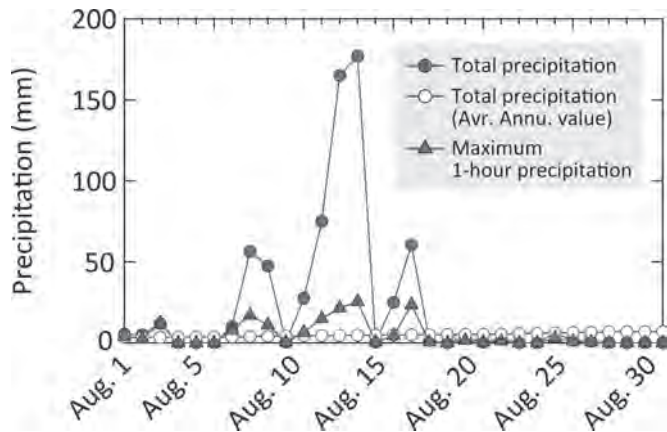
administrative officers who supported them.

### **From Disaster Occurrence to Resumption of the Event**

A linear precipitation zone born in mid-August 2021 brought heavy rain in the regions around the Tokakuji area. Figure 8 shows the rainfall data of August 2021 gathered at the observing station in Yukuhashi City, next to Kanda Town, which shows a large spike of precipitation around the Tokakuji area between August 11 and 15.

Disaster occurrence by excessive rainfall was forecasted by Kanda Town at the time of the start of the rain, and 2,107 households, total of 4,641 residents, were ordered to evacuate to the official evacuation center before the rain became heavier. This excessive rainfall caused 45 cases of damage such as road flooding, flooding from overflowing rivers, and avalanches.

Figure 9 shows an example of the status just after the landslides occurred. Spectator seats installed on slopes collapsed and the flat area of the precise location where the event is normally performed was buried under a huge volume of sediment. As the



**Figure 8**  
Daily precipitation trend in August 2021



**Figure 9**  
The status in an area just after a landslide  
(Photo: Kanda town board of education)

surrounding ground was loose due to the rain, other landslides could have happened in the same area if heavy rain were to have occurred again.

Reconstruction efforts were started just after the disaster, and Figure 10 shows the status after removal of sediments and the progress of reconstruction as of June 2022. Over half a year, vegetation sheets were set on the slopes and a series of constructions was conducted to prevent further landslides. This effort, however, was judged to have led to limited outcome, due to slower plant growth than expected. The construction methods were therefore changed during the reconstruction. For the new reconstruction planning, administrative officers referred to construction methods used for tangible heritage such as mounds and castle ruins.

Figure 11 shows the status one day before the event in April 2023 after reconstruction was completed. The pillar was erected at the same point as before the disaster. The only difference was that the spectator stands were removed from the slopes. Stands were intentionally not reconstructed to prevent future landslides.



**Figure 10**  
Reconstruction status as of June 2022  
(Photo: Kanda town board of education)



**Figure 11**  
Reconstruction status as of April 2023  
(Photo: Tomomi Goto)

The event that was held in 2023, the first time after the disaster, had a limited number of spectators due to the COVID-19 pandemic, and thus the removal of the stands did not impact the event. However, once a similar number of spectators as before the pandemic returns, it will become difficult to accommodate all of them at the given spot where the event is held. Thus, the bearers need to discuss how to accommodate the spectators in the future.

### **Disaster Responses by the Event Bearers**

Figure 12 shows an organized flow chart to visualize the responses by the bearers and administrative officers who responded to the disaster, based on the flow shown in Figure 5.

The bearers and administrative officers efficiently and effectively responded to the disaster through prompt ascertainment of the damage situation and provision of first aid, which is the initial goal. Within a few days after the disaster, the damage was identified and emergency response was started to prevent secondary disasters, led by



**Figure 12**  
Disaster response for  
*Tokakuji no Matsue*

administrative officers. Their responses at this stage were excellent. Damage to ICH is often difficult to recognize and be promptly shared.

On the other hand, the sharing of the information among the bearers had issues. Many people of the younger generations live outside of the Tokakuji area, where aging of the population combined with a diminishing number of children is in progress. These younger people play very important roles in the event. They return to the area at the time of the event while they live in different places. Disaster damage information was only shared with these younger bearers at much later stages after the disaster. Therefore, some disagreements and emotional conflict among the bearers were observed at the early stages.

For the interim goal, stable progress was made to resume the event. Administrative officers continuously updated the basic information related to the event, shared it with officers of the prefectural and national government, and asked for their advice about appropriate responses. Based on the directions of the government institutions, the administrators discussed the targeted measures to resume the event with the bearers and set a task plan targeting a resumption of the event two years later.

Just after the disaster, the bearers and stakeholders discussed the alternative ways to resume the event; however, they concluded that it would be necessary to conduct the event in the original way to motivate the bearers to take initiative. Then they decided to target resumption of the event both at the original place and in the original way. If there had been some significant disagreement or conflict at that stage, the event might have been resumed later. Therefore, even though there were some challenges and small changes involved, the tasks required to resume progressed steadily and the bearers managed to resume the event in 2023 as planned.

### Ability to Counteract Disaster

The final goal of planning shown in Figure 5 was set as preparation for later disasters. The next challenge for *Tokakuji no Matsue*, which has overcome the disaster, is to become more resilient to counteract future risks by preparing for future disasters. At

the time of this writing, no movement to prepare for future disasters was seen.

Regions around the Tokakuji area are set as high-risk zones for landslides by the prefectural and national governments. The disaster occurred in the past was predictable. Though the disaster responses were considered to have been made very promptly and effectively, the damage itself could have been smaller and the event could have resumed even more smoothly if the probable damage had been evaluated and the countermeasures and disaster responses had been discussed beforehand.

Furthermore, the damage was limited to the particular spot where the event is conducted, while it could have hit the tools and bearers themselves if the landslides had happened in different places. However, the interviews held in the Tokakuji area by the Center revealed that many residents still underestimate risks and do not proactively take appropriate actions toward possible natural disaster events even though they know of existing risks within their residential area.

This disaster gave the bearers a good opportunity to recognize not only disaster risks for their event but also potential risks underlying their own lives. If this opportunity can lead to visualizing and sharing regional disaster risks, and also to forming a common recognition and agreement on pre-disaster preparation and post-disaster responses among the residents, the disaster risk management practice for ICH can be developed into disaster risk management practice for the whole life of the residents.

## **CONCLUSION**

ICH is the manifestation of cultural traditions existing alongside local people's lives. The discussions so far have been made from a viewpoint considering local realities. However, discussions from this stance are limited by various real bottlenecks. Therefore, it is difficult to determine actual tasks needed as ways to protect ICH from disasters and to smoothly resume the events. It is considered that pathways to resume events can diverge due to various factors, including the residents' opinions as well as the actual situations.

However, through the Center's initiatives, it appears that the disaster risk management for ICH can be organized by converging various methods under one methodology, including each area of diversity, even though it had been considered impossible.

The mandatory aspect needed to make risk management, including the pre-disaster preparations and post-disaster responses proposed in this report work effectively, is the task of making bearers understand the value of their own ICH. Only when bearers themselves can understand the real value and recognize its real meaning, ICH can have enough resilience against disasters and policy can be constructed for reconstruction and recovery after the event of a disaster. We will further polish the proposed measures by evaluating the outcomes of the plan proposed in this report in various areas.

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