(Appendix)

Collection of Critical Situations during Flood Emergency Response

(Appendix: Local Government Response under COVID-19)

June 2020

International Center for Water Hazard and Risk Management (ICHARM) under the auspices of UNESCO,
Public Works Research Institute (PWRI), Japan

The Purpose of This Appendix Booklet

- In the booklet on Collection of Critical Situations during Flood Emergency Response main edition, we newly define examples of situations that descend into “difficulties, panic, confusion, indecision and worries” faced by disaster managers as critical situations in disaster response, extracting and introducing typical examples from the verification materials (verification reports, etc.) on past flood response actions published by local governments in Japan.

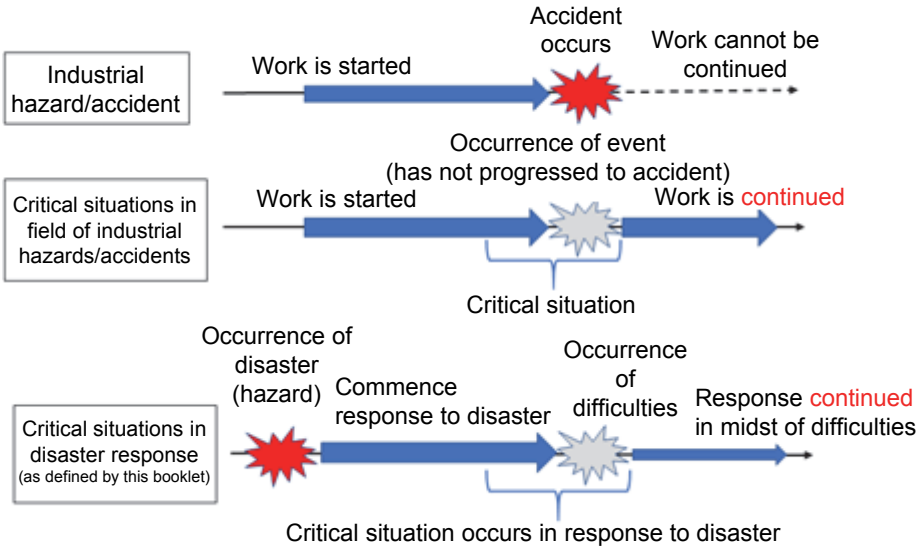
- Now, in addition to responding to flooding as we have up to now, we are in a situation where the risk of infection from COVID-19 is a reality as well, so when evacuating local citizens and receiving them into shelters, we must respond in ways that take into account the risk of infection from COVID-19. In particular, with many people evacuating into the same facility (shelter), the 3Cs (crowded places, closed spaces and close-contact settings) emerge as issues that seriously need to be avoided, especially for those at high risk of infection, such as the elderly and people with underlying health conditions.

- Accordingly, as a appendix to the Collection of Critical Situations during Flood Emergency Response main edition, this booklet introduces examples that show the heightened risks of COVID-19 to disaster prevention managers and evacuees who are involved with personnel members challenged by the descent into “difficulties, panic, confusion, indecision and worries” at times of flooding while the current risk of infection from COVID-19 exists. Note, the targeted damage phase goes up to establishment of shelters, but does not deal with livelihood reconstruction support or recovery. The term “shelter” in this booklet is a general term for evacuation destinations designated by local governments, referring to designated emergency evacuation sites and designated shelters.

- For every page listing a case (an example) in the Collection of Critical Situations during Flood Emergency Response main edition, the corresponding lessons learned are introduced from three perspectives: “facilities”, “procedures” (setups to aim for) and “human skills”. Whereas, in this appendix compiled of flood responses under the risk of COVID-19 infections, we provide the necessary measures that need to be taken from four perspectives: “facilities”, “procedure”, “public relations” and “during emergency response”. Presently, we are in a now or never situation, where the risks of flooding are close at hand and we lack the luxury of time. Hence, as fomenting the “human skills” raised in the Flood Emergency Response main edition requires time, reaching that goal will be difficult as the flood season looms. Nevertheless, continuing to push the “public relations” perspective will help to foment “human skills”. Indeed, as the Flood Emergency Response main edition carries the expectation that local governments will fully prepare in advance for any disaster that may occur, it does not carry any sections on what to do “during disaster response”, but the appendix does because the situation is urgent and time is pressing, so local governments need to make the best minimum response “during disaster response”, even if advance preparations have not been made, which is why the appendix carries the “during response to disaster” perspective.

- For each of the cases (examples), we raise measures that conceivably should be beneficial if implemented as either advance measures or as measures during response to disaster. However, in combatting disasters amidst the risk of COVID-19 infection, all local governments find themselves in unprecedented response situations – so, they may not be able to implement all of the measures listed here, and, even if they do, there is no guarantee that the measures will offer flawless solutions. Yet, we hope this appendix will offer hints to local governments striving to consider the necessary measures to take amid their individual regional situations and in tandem with the extent of the spread of COVID-19.

Definitions of Critical Situations during Disaster Response in this Booklet



How to Make Use of This Booklet

●We propose that this booklet should be used in two ways by local governments in preparations to smoothly combat disasters.

1. Using it as training material for individual personnel

(1) Read each page, imagining whether the same kind of critical situations could occur in your own local government.

(2) If a similar case looks likely to happen, read the list of measures in the bottom half of the page, and think about how to tackle the issues in advance as well as what would be effective precautions to take in the middle of disaster response.

2. Using it as training material for group work and disaster imagination games

(1) Bring members of the department or disaster response unit together, and, depending on circumstances and hour of the day of gathered members, pick one or more of the cases from this booklet. Then use the worksheet provided at the end of the booklet to create an image of a disaster situation.

(2) First, without looking at the page with the compilation depicting the disaster case, everyone should fill out their own answers to the five questions shown below.

(3) Once everyone has written their answers, members should explain their own ideas on the matter, working through the questions in a debate format.

(4) Next, look at the response list in the second half of the page, and discuss the excesses and deficiencies of the debate in item (3).
For any local government responding to a disaster amidst the current risk of infection from COVID-19, the situation is unprecedented, and the extent of the spread of infection will dictate the kind of measures taken in advance or during response to disaster. Among the list of measures, members need to discuss issues from a perspective that questions what are the measures that need to be taken for their own individual local governments and their own local realities.

(5) Lastly, draw together measures that are conceivably needed from here on in areas such as “facilities”, “procedure”, “public relations” and “during disaster response”.

Five questions for critical situations in responding to flood disaster

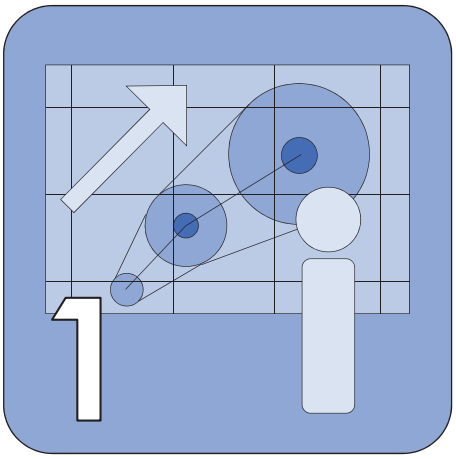
(1) Could a similar situation occur in your local authority/department?

(2) Are necessary measures (facilities) in place to avoid the situation occurring?

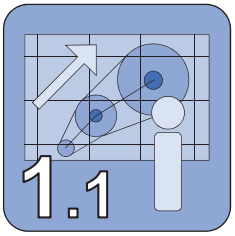
(3) Are necessary measures (structures, manuals and plans, etc.) in place to avoid the situation occurring?

(4) Are necessary measures (Public Relations) in place to avoid the situation occurring?

(5) Are necessary measures (during response to disaster) in place to avoid the situation occurring?



Initial Response



No-one has responded to a disaster in the midst of the COVID-19 pandemic! What do we have to do!

~ Massive apprehension about having to respond to a disaster for first time in the COVID-19 pandemic ~

Target

● Members of disaster control headquarters

Critical Situation

Critical situation point

For all personnel members responding to a disaster amidst the risk of infection from COVID-19, it must be a first-time experience. And, as no-one has been in such a situation, it must be impossible to judge what kind of response is appropriate.

Result Response becomes fraught with worries because it is a first-time experience, and each response and decision takes time, which leads to confusion.

Measures

Public Relations — Enhance personnel understanding about disaster response amidst risk from COVID-19

- For all personnel members responding to a disaster amidst the risk of infection from COVID-19, the situation is a first-time experience. Hence, it is necessary to consider what ought to be done differently in responding to a disaster amidst the risks of the COVID-19 pandemic, and then to get each personnel member to understand those differences.

Structure — Produce a manual for responding to disasters amidst COVID-19 pandemic

- It is necessary to produce a manual for responding to disasters amidst the COVID-19 pandemic, gathering the points that ought to be given attention, so that each personnel member can make decisions and respond without taking too much time or becoming confused in confronting situations beyond expectations.

Structure — From the initial disaster response stage, seek participation in headquarters of healthcare and welfare department personnel who are knowledgeable about infection prevention

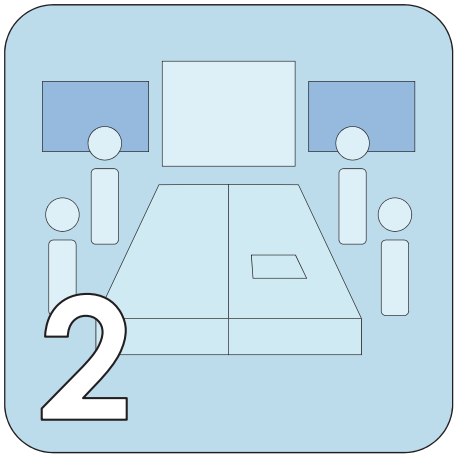
- As decision making that pays attention to prevention of COVID-19 infections from the initial response to a disaster is necessary, a system must be prepared to enable permanent stationing from initial disaster response of healthcare and welfare department personnel who are knowledgeable about infection prevention.

Structure — Review personnel assembly criteria and assembly contacting method

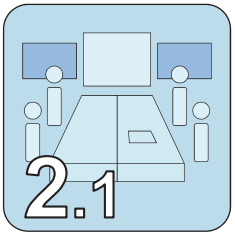
- To permanently station healthcare and welfare department personnel who are knowledgeable about infection prevention from initial disaster response, the personnel assembly criteria and rules as well as the emergency contacting method for assembly and its email system, etc., must be reviewed.

Structure — Implement training and workshops on establishing a disaster control headquarters in advance

- Undertake training and workshops on establishing a disaster control headquarters in advance, so that disasters can be responded to as appropriate infection prevention is implemented without personnel becoming flustered when confronted by the risks of the COVID-19 pandemic during disaster response. In this way, it is vital to raise the knowledge of personnel to enable them to respond as needed even when the situation is not a textbook one.



Headquarters Management



There're too many people in disaster control headquarters – remember the 3Cs (Closed space, Crowded places and Close-contact settings).

~ Disaster control headquarters is crowded ~

Target

● Members of disaster control headquarters

Critical Situation

Critical situation point

The disaster control headquarters was launched, but too many people gathered, making the situation a 3Cs one (Crowded places, Closed spaces and Close-contact settings). Swift disaster response is necessary, but there is a worry about infection from COVID-19.

Result The infection risk of members of the disaster control headquarters increases.

Measures

Facilities Ensure that the disaster control headquarters room is spacious and well ventilated

- Use a spacious, well-ventilated room as the site to install the disaster control headquarters.

Facilities Arrange tables and chairs in a way that avoids the 3Cs

- To avoid the 3Cs, consider a room layout that pays attention to the infection, including spacing apart tables and chairs.

Facilities Arrange infection prevention goods in the disaster control headquarters room

- Arrange infection prevention goods in advance, including hand sanitizer and masks.

Facilities Ensure that the disaster control headquarters room has an online environment

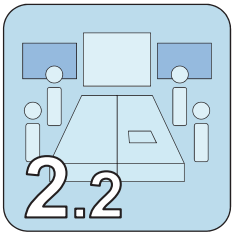
- Equip the disaster control headquarters room with an internet environment (LAN, Wi-Fi, etc.) that connects headquarters with offices inside local government and the outside world, to reduce the number of local government personnel and external personnel who have to enter the disaster control headquarters. When doing this, also envisage the response needed if there is a power outage due to the disaster.

During Disaster Response Regularly ventilate

- Regularly ventilate the disaster control headquarters room when it is in use.

During Disaster Response Limit the number of unnecessary entries

- As much as possible, reduce the number of people who can access the disaster control headquarters room, to reduce the risk of infection to members of the disaster control headquarters.



Some people from external stakeholder bodies have come to the disaster control headquarters, and I'm worried about the risk of infection!

~ Increased contact with non-locals, such as liaison officers from external government bodies ~

Target

● Members of disaster control headquarters

Critical Situation

Critical situation point

In usual responses to disaster, it is possible for numerous people from external locales to want to make a visit to the disaster control headquarters, such as liaison officers, fire officials and SDF officials from local branches of agencies under MLIT or connected to prefectures.

Result The infection risk of members of the disaster control headquarters increases.

Measures

Facilities Ensure a space for external personnel to be accepted into adjacent to or nearby the disaster control headquarters room

- In usual responses to disaster, there are cases where spaces are established in the room of the disaster control headquarters for personnel, such as liaison officers from local branches of agencies under MLIT or connected to prefectures, fire officials and SDF officials. However, accepting in such people from external bodies increases the number of people in the headquarters room and the exposure to non-locals – so, amidst this COVID-19 pandemic, consideration needs to be given to ensuring a space for external personnel adjacent to or nearby the disaster control headquarters room.

Procedure Coordinate in advance with external stakeholder bodies to reduce person-to-person contact during disasters

- Ensure remote access to computers, etc., to reduce as much as possible the amount of contact with personnel from external bodies, and then consult in advance with the stakeholder bodies to see if it is possible for them to stay away from the headquarters room.

Facilities Increase the number of dedicated phones, etc., to connect the disaster control headquarters with external stakeholder bodies

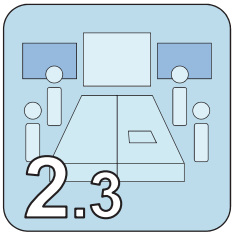
- To minimize direct contact with personnel from external stakeholder bodies, increase the number of phones with dedicated lines to those bodies to enable contact, and create a phone number list to manage calls.

Procedure Conduct information exchanging training between disaster control headquarters and external stakeholder bodes

- If dedicated phones are newly installed to link up with organizations outside of the headquarters and the local government in order to minimize direct contact with personnel from external stakeholder bodies, then training with those phones should be conducted in advance.

Facilities Equip headquarters with infection prevention goods

- Equip in advance the disaster control headquarters with infection prevention goods, such as sanitizer, for the use of people arriving from external stakeholder bodies.



Personnel who are knowledgeable about healthcare/welfare and infection prevention have not turned up at the disaster control headquarters!

~ Lack of personnel at disaster control headquarters who are knowledgeable about healthcare/welfare and infection prevention ~

Target

● Members of disaster control headquarters

Critical Situation

Critical situation point

From the initial response to a disaster, there needs to be consideration of and decision making about how to prevent COVID-19 infections – however, the personnel with knowledge about healthcare/welfare and infection prevention have not assembled in the disaster control headquarters, so cover for infection prevention is short.

Result Decision making that takes into account infection prevention will be hindered.

Measures

Procedure Consider implementing division of duties for healthcare/welfare-savvy personnel who are needed for decision making at the disaster control headquarters

- From the initial disaster response, predictably, there will be a need for decision making concerning the prevention of COVID-19 infections. Thus, envisage in advance who you will need to participate as personnel from the healthcare and welfare department as well as infection-prevention-savvy personnel, and then consider the roles they will need to take in the disaster control headquarters.

Procedure Review personnel assembly criteria and contact method for assembling

- To ensure permanent stationing of healthcare and welfare department personnel and infection-prevention-savvy personnel at the disaster control headquarters, review the personnel assembly criteria and rules as well as the emergency contact network and emailing system used to contact personnel for assembly purposes.

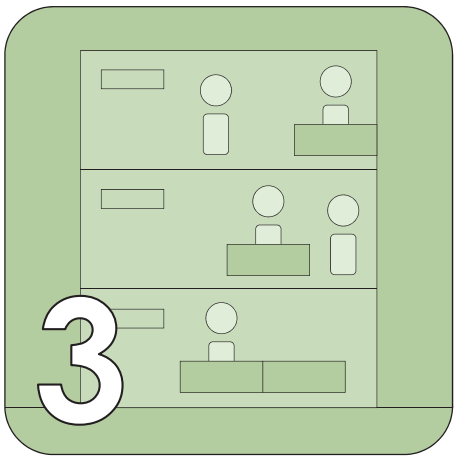
Procedure Prepare a contact list of stakeholder bodies connected to COVID-19 infections

- In dealing with COVID-19 infections, it is highly likely that you will need to make contact with or collaborate with not only your own healthcare and welfare department and public health center in your local government but also multiple internal/external stakeholder bodies in prefectures and those that serve as portals to national government. Therefore, to respond to a disaster swiftly, prepare in advance a contact list for those bodies, and make sure that the list is kept in the disaster control headquarters.

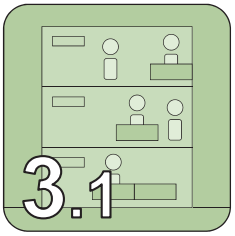
Procedure Organize a map, etc., in the disaster control headquarters showing locations of medical institutions

- Equip in advance the disaster control headquarters with the necessary medical institution details, such as a institute list and location map, in order to deal with people infected with COVID-19.

- As transportation of infected persons maybe needed not just in your municipality but across a wider area, prepare materials that will give an insight into the situations in medical facilities in nearby municipalities. For this, be aware of the positional relationships of medical institutes and the roads to be used to transport patients with the areas that are at risk of flooding and/or landslide damage.



Structure in Government Office



All sorts of questions are being phoned in on everything from disaster damage to medical treatment, but our answers are never enough!

~ Phone inquiry response limited due to vertically segmented administrative system in local government office ~

Target

● Members of disaster control headquarters, disaster prevention managers, telephone operators

Critical Situation

Critical situation point

Amidst the COVID-19 pandemic, it is highly likely that there will not only be phone inquiries about flooding and landslides at times of disaster but also a broad range of questions about what to do to prevent infection. And, as many of the inquiries will require a high level of healthcare/welfare knowledge, it is quite possible phone lines will become jammed by the response to such phone calls.

Result Phone calls that are usually dealt with, such as communication with disaster prevention department and stakeholder bodies and the gathering of information on dangerous areas, will not be possible.

Measures

Procedure Build up a phone system that covers the entire local government

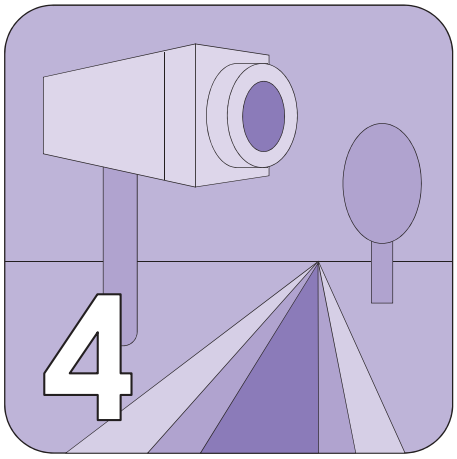
- From past flooding, there are reports that state how smooth disaster response was hampered due to disaster control headquarters becoming overwhelmed by phone inquiries. Hence, first, the mindset must be changed to make sure that the entire local government handles external phone inquiries, not the disaster prevention section.
- When the disaster control headquarters is established, deputize personnel members from other departments to deal with phone inquiries on behalf of the disaster prevention section, which, as the general affairs unit, must dedicate itself to the task of secretariat/staffing for the disaster control headquarters.

Procedure Handle phone calls in collaboration with departments related to healthcare and welfare

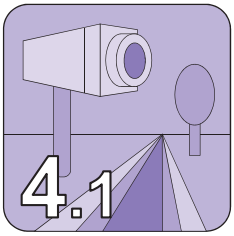
- At times of disaster, it is likely that along with the phone inquiries about flooding and landslides there will be many calls about how to prevent COVID-19 infections, so preparations must be made, such as deploying infection-prevention-savvy personnel in the team dealing with phone inquiries, making sure that infection-related calls are smoothly transferred to that personnel.

Procedure Create a list of predictable answers and prepare necessary detailed information to deal with phone inquiries

- Responding to a disaster amidst the COVID-19 pandemic will be a first for all personnel, and they will come up against questions they have never had before. Thus, to deal with calls smoothly and concisely as possible, take steps, such as creating in advance a list of predictable answers, and keep detailed information, such as a list of shelters other than the designated ones noted in emergency orders, on hand to provide any backup information that may be needed to augment answers.



Collecting Info



We're being overwhelmed by phone calls from the public asking things like whether it's safe to evacuate upstairs (vertical evacuation), and we can't get on with our disaster response work!

~ Personnel and phone lines monopolized by surge of inquiry calls ~

Target

● Members of disaster control headquarters, disaster prevention managers

Critical Situation

Critical situation point

Citizens who recognize the dangers of flooding and landslides but are worried about becoming infected by COVID-19 at designated emergency evacuation sites and shelters are jamming phone lines with inquiries about whether they can evacuate upstairs (vertical evacuation) in their own homes, etc., or whether there are alternative shelters to the designated ones.

Result Personnel cannot get on with the work they ought to do, including communicating by phone with disaster prevention departments and stakeholder bodies as well as gathering information about dangerous areas.

Measures

Public Relations

Make the public aware of vertical evacuation and evacuation to shelters other than the designated emergency evacuation sites/shelters, etc.

- Using inundation/flooding probability material as reference, extract out areas where flooding depth and time is minimal, and encourage people living in those areas to evacuate upstairs (vertically evacuate) and that they must decide their own individual evacuation method in advance; furthermore, in readiness to vertically evacuate, people need to be made aware that they ought to stock their vertical evacuation site with food and equipment to counter power outages. Various methods can be used to make the public aware of vertical evacuation and the stockpile needed, such as public relations magazines and disaster prevention emails.

- Also, make the public aware in advance that evacuation is about avoiding calamity, so if they are in a safe place, there is no need to move to a designated emergency evacuation site/shelter. Here, regarding probable evacuation destinations, inundation/flooding probability maps should be used to confirm areas free of flooding risk, and guidance offered on evacuation destinations on those assumptions.

Procedure

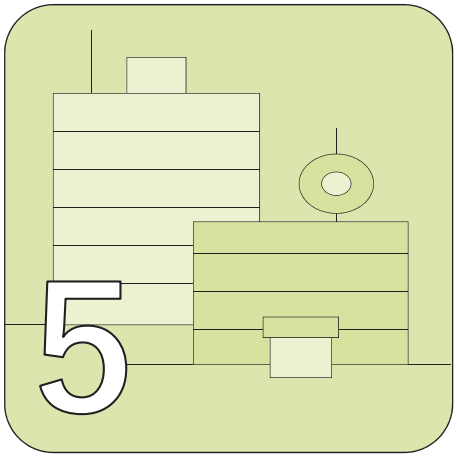
Communicate detailed information using websites and bulletin boards, etc.

- In cases where local citizens are jamming call lines with inquiries about areas recommended for vertical evacuation or the whereabouts of shelters other than designated emergency evacuation sites and shelters, it is impossible to respond to each inquiry by asking for addresses in order to provide the information. Therefore, to deal with those kinds of inquiries, you must upload in advance the necessary detailed information to your websites, and tell callers that they can check the information on the websites themselves.
- Also, as an effective way of helping local citizens who are not able to access websites, local neighborhood associations should be provided with maps showing recommended vertical evacuation areas and lists showing shelter destinations other than the designated ones, so that the neighborhood associations can pin them up in community centers and notice boards in hamlets.

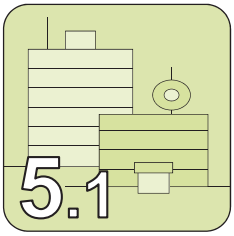
During Disaster Response

Collaborate with presidents of neighborhood associations, disaster prevention leaders and volunteer fire fighting corps and flood fighting corps

- Even if the public are made aware of evacuation information in advance, there will always be some who did not get the information. Therefore, it is necessary to systemize cooperation to enable collaboration with presidents of neighborhood associations, local disaster prevention leaders and volunteer fire fighting corps and flood fighting corps, so that they too can inform local citizens in times of disaster.



Collaborating with Stakeholder Bodies



The hospital needs to evacuate. Have the rescue team been clearly told that there are COVID-19 patients in the hospital?

~ Increased risk of infection during rescue work due to a lack of collaboration with stakeholder bodies ~

Target

● Members of disaster control headquarters, rescue teams

Critical Situation

Critical situation point

Depending on the area, there are medical facilities receiving COVID-19 patients, so, in an emergency, if the risk of flooding increases, patients, including infected ones, may need rescuing. Hence, if the rescuers are not informed about COVID-19 patients and, therefore, do not take sufficient infection prevention precautions, they too could be at risk.

Result This risk of infection increases for rescuers, and, if infected, they may become infectors themselves, spreading the virus even further.

Measures

Procedure

Grasp the risks of flooding and mudslide damage at medical facilities accepting COVID-19 patients, and consider your response

- Check in advance whether medical facilities accepting COVID-19 patients are at risk of flooding and/or vulnerable to mudslides. If they are, regular consideration must be given to taking care of COVID-19 patients on a floor with the least need for evacuation to external sites – for example, third floor or higher and floors/sides of buildings furthest away from hillsides, etc.
- Also, consideration must be given in advance through cooperation with stakeholder bodies (rescue teams, etc.) to give full consideration to infection prevention for situations where hospitalized COVID-19 patients need to be evacuated to external sites, such as: where should they be evacuated to?

Procedure

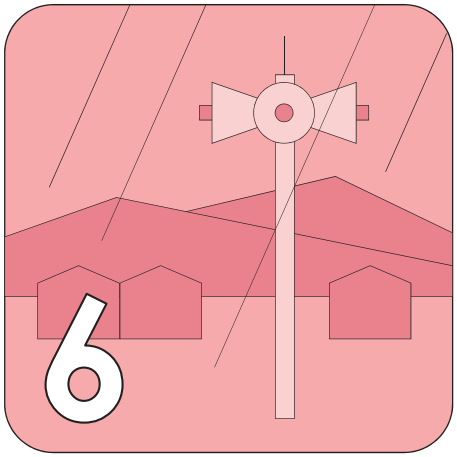
Collaborate with healthcare/welfare departments and organizations and departments involved in disaster rescue

- If there are medical facilities at great risk of flooding and/or damage from mudslides, regularly collaborate with healthcare/welfare departments as well as fire departments/organizations that will do the actual rescuing in times of disaster to mutually deepen understanding of the circumstances surrounding hospitalized COVID-19 patients and the infection prevention measures that need to be taken at time of rescue.

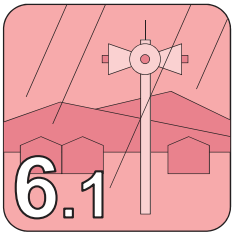
During Disaster Response

Make absolutely sure that rescue teams are suitably informed about and protected from infection

- If patients need to be evacuated from a medical facility accepting COVID-19 patients, make absolutely sure that rescue team members are properly informed about everything, including the details about infected patients, and that they take infection prevention measures.
- In cases where both conventional patients and COVID-19 patients are to be rescued, they will need to be separated for rescue purposes. If, by chance, in the rescue process, non-infected patients and rescue team members come into contact with infected patients, thus becoming infectors themselves, they must be quarantined.



Issuing Evacuation Advisory, etc.



Residents are saying that they want to evacuate early, avoiding the risk of infection from COVID-19!

~ Responding to early evacuations to minimize evacuation confusion ~

Target

● Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

Residents are asking for shelters to be opened to accommodate early evacuation before large crowds of people start to evacuate and, thus, avoid the risk of COVID-19 infection during the melee of evacuation.

Result　Responding to this request would run contrary to the priorly prepared evacuation manual, leading to confusion at shelters.

Measures

Procedure　Seek out areas where early evacuation would be desirable

- Taking into consideration the predictable numbers of people who will evacuate to designated emergency evacuation sites/shelters, the proportion of elderly in areas scheduled for evacuation, floor space sizes and width of access roads, etc., seek out the designated emergency evacuation sites/shelters that look to be at greater risk of spreading infections - in particular, seek out evacuation routes/receptions/shelters that will become crowded.

Procedure　Consider officially announcing early evacuation to enable dispersed evacuation

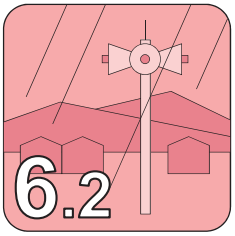
- Consider officially announcing an earlier than usual evacuation to enable evacuees to evacuate in a dispersed manner to alleviate the confusion (melee) during evacuation. To do this, you will need to review the standards for officially announcing evacuation information. In particular, on such occasions, bear in mind that the early official announcement of evacuation information needs to be for areas that you have sought out (earmarked) as being better served by an early evacuation.

Procedure　Consider the procedures for opening shelters for early evacuation, etc.

- Envisage making an earlier than usual official announcement of evacuation information, to assist in the process of considering and checking the procedures to open shelters earlier than usual. If facility (shelter) managers and nearby residents give their approval for opening shelters, make sure the personnel overseeing those shelters/residents are made aware of that approval.

Public Relations　Make the relevant residents aware of early evacuation

- As the local authority, your job is not to just officially announce earlier than usual the evacuation information, you must also make residents aware of the importance of dispersed evacuation from the perspective of alleviating the confusion (melee) during evacuation to avoid COVID-19 infection risks.



Residents are hesitating to start evacuating because their worried about COVID-19!

~ Residents worried about COVID-19 are hesitating to evacuate ~

Target

● Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

With official announcements of alert level 4 evacuation advisories, residents are hesitating to start evacuation because of worries about 3Cs (closed spaces, crowded places and close-contact settings) at designated emergency evacuation sites/shelters.

Result　There is possibility that human damage is increasing due to flooding and mudslides because residents are not evacuating.

Measures

Procedure　Consider evacuation destinations other than conventional designated emergency evacuation sites/shelters

- Evacuation is about avoiding calamity. Thus, consideration must be given to finding alternative evacuation destinations, such as public facilities and hotels, because once conventional designated emergency evacuation sites/shelters have been converted to create two-meter spaces between evacuees to prevent virus spread, evacuation capacity will be insufficient.

Procedure　Consider areas where vertical evacuation can be encouraged

- Use inundation/flooding probability material as reference to extract out areas where flooding depth and time is minimal, and consider which could become areas where vertical evacuation can be encouraged.

Public Relations　Make the public aware of vertical evacuation and evacuation to shelters other than the designated emergency evacuation sites/shelters, etc.

- Make the public aware prior to the flood season that they should envisage an evacuation destination other than a conventional designated emergency evacuation site/shelter, such as a friend's or relative's home. As part of that awareness, instruct the public that they need to envisage an evacuation destination that is not at risk of above-floor flooding (check inundation/flooding probability map, etc.). Also, in advance, make the public aware of areas where vertical evacuation is encouraged.

Procedure　Consider space division at designated emergency evacuation sites/shelters

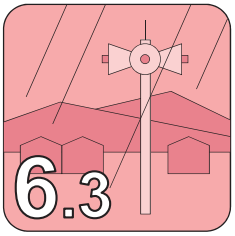
- Consider accommodating suspected infection cases, the elderly, the pregnant and people with underlying conditions in separate medical facilities, etc. Also, consider with managers of facilities (shelters) the feasibility of using spaces separated from the big main shelter area, including changing rooms and classrooms that exist in the shelter facility. If utilization is possible, consider specific usage methods.

Public Relations　Call on evacuees to bring their own infection prevention shelter goods

- Make residents of areas where evacuation might be necessary aware that they should bring their own infection prevention goods when evacuating.

During Disaster Response　Provide guidance on evacuation using space division at designated emergency evacuation sites/shelters

- If space division is implemented at designated shelters, as soon as evacuees arrive at the shelter entrance, calmly and securely ensure that each person/family unit is allotted a space, enabling space-divided evacuation. Also, before entry to the shelter, carry out temperature and health checks.



We're overwhelmed by evacuees in cars, and they're jamming the roads!

~ Delays in evacuation due to traffic jams caused by increasing numbers of evacuees using cars ~

Target

● Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

Moving around – even in cars – outdoors in heavy rain is dangerous. However, to avoid the risk of COVID-19 infection, evacuee cars (being used as shelters) are overwhelming roads near to shelters and other open spaces, causing confusion at those sites and traffic jams on their access roads, hindering the evacuation of other residents and emergency activities.

Result Traffic jams cause evacuation delays and confusion.

Measures

Procedure Envisage locations where numerous evacuees in cars could gather

- In an attempt to avoid COVID-19, predictably evacuees in cars will overwhelm areas around shelters or other open spaces. Therefore, in advance, envisaging flooding risks, secure open spaces for car evacuation, such as sports grounds of schools safe from flooding.

Public Relations Make the public aware that some places can be used for car evacuation but that there are places that should not be used

- In making the public aware of evacuation destinations other than conventional designated emergency evacuation sites/shelters, if there are any, also inform them about any big open space that might be able to accommodate in-car evacuation without problems. Also, if there any locations where the gathering of numerous in-car evacuees would hinder the emergency response or cause confusion, be sure to tell the public not to gather at those locations.

Procedure Consider setting "no parking" zones around designated emergency evacuation sites/shelters

- In cases where hinderance will predictably occur due to numerous in-car evacuees gathering at designated emergency evacuation sites/shelters, consider clearly setting up no-parking zones in such shelter areas and methods to stop people parking.

Public Relations Call on evacuees to bring their own infection prevention shelter goods

- As there are cases where in-car evacuees go to designated emergency evacuation sites/shelters to collect food and water, call on them in advance to carry their own infection prevention goods.

During Disaster Response Provide guidance to in-car evacuees

- At the stage when in-car evacuees start to gather, tell them not to park in such a way that will hamper emergency activities, make clear the no-parking zones, and guide them to locations where they can park.

- Also, make in-car evacuees aware of actions to be taken to prevent economy class syndrome (deep vein thrombosis from remaining seated for long spells).

Disseminating Info

We've got to make a broadcast to the public on government emergency radio, but we're not sure what needs to be said?

~ Confusion in government emergency radio broadcast due to a lack of advance preparation ~

Target

● Disaster prevention managers

Critical Situation

Critical situation point

Government emergency radio had to be used to tell the public to evacuate, but neither the draft broadcast speech nor the contents of the message to the public had been prepared.

Result In the midst of a disaster, consideration had to be given to what would be said in the government emergency radio broadcast, which delayed response.

Measures

Procedure Prepare message details to call on public to evacuate with infection prevention in mind

- When calling on the public to evacuate, you must take into consideration COVID-19 infection prevention, telling the public to avoid the 3Cs (closed spaces, crowded places and close-contact settings) during evacuation and to carry infection prevention goods to evacuation destinations. And, to prevent confusion during a disaster, it is a good idea to decide in advance the contents of what needs to said to the public and prepare in advance the broadcast speech to be used.

Procedure Prepare calls to the public in relation to evacuating to locations other than conventional designated shelters or to evacuate upstairs at home (vertical evacuation)

- In calling for the public to evacuate, you must tell them about the option of evacuation destinations other than the conventional designated emergency evacuation sites/shelters (friend's or relative's home, etc.) as well as about areas where vertical evacuation is encouraged. And, to prevent confusion during a disaster, it is a good idea to decide in advance the contents of what needs to be said to the public and prepare in advance the broadcast speech to be used.

Procedure Collaborate with public health center and healthcare/welfare departments in preparing contents to be broadcast to public

- In preparing the broadcast contents calling on the public to evacuate with infection prevention in mind, be sure to collaborate with the public health center and healthcare/welfare department in local government to consider together in advance the contents of the broadcast.

Procedure Prepare information, such as a list of evacuation destinations other than conventional designated emergency evacuation sites/shelters

- Prepare information to broadcast on government emergency radio to the public, so that there will be no confusion at time of disaster, such as regularly maintaining a list of evacuation destinations other than conventional designated emergency evacuation sites/shelters.

Facilities Prepare written drafts for emergency update emails and disaster prevention emails that people sign up for

- Apart from government emergency radio broadcasts, emergency update emails or registered disaster prevention emails need to be sent to mobile phones, so it is a good idea to prepare in advance written drafts (templates). In particular, it is best to prepare in advance messages for mediums with text length restrictions.

I need to put out an emergency update email to mobile phones that includes a message about infection prevention during evacuation, but I can't squeeze it in because of message length restrictions!

~ Confusion set in when trying to send emergency update email due to lack of advance preparation ~

Target

● Disaster prevention managers

Critical Situation

Critical situation point

Apart from government emergency radio broadcasts, emergency update emails also have to be sent out to mobile phones, and those emails are packed with information, so including a message about infection prevention infringed on word count restrictions, making it hard to get the message over.

Result In the midst of a disaster, consideration had to be given to what would be said in the emergency update email, which delayed response.

Measures

Procedure Prepare message drafts for emergency update emails and disaster prevention emails that people sign up for

- When sending emergency update emails or registered disaster prevention emails to mobile phones, it is necessary to prepare in advance the message drafts (templates). And, in cases where the emergency update email system can be connected to the disaster prevention communication system of the local government concerned, then check to see if a template setting function is available in the system and, if it is, turn that function on. Then, in particular, if there are word count (text length) restrictions for emergency update emails that are going to limit what you can write, you can refine your composition in advance.

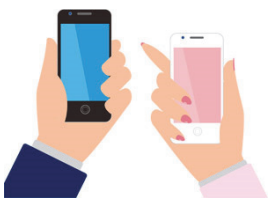
Procedure Provide detailed information on evacuation destinations other than conventional designated emergency evacuation sites/shelters

- Push-based information delivery (a system where information can be transmitted without the receiving party having to do anything), such as emergency update texts/mails to mobile phones, is an excellent way of passing on emergency status information to the public, but the amount of transmittable information (text length) is restricted. Whereas, a pull-based information delivery device (a device that has to be manipulated in some way by the receiving party to access information) is a far richer source of information than push-based information delivery systems. Hence, at times of disaster, the push and pull information delivery systems must be used in combination effectively.

- Although putting lists, including a list of evacuation destinations other than designated emergency evacuation sites/shelters, into emergency update texts/mails is not feasible, if you have detailed information you want to pass on to the public, upload it in advance to the relevant website, and then provide the website link in a push-based information delivery, to enable the public to access the website and the information. This kind of response needs to be envisaged. However, past disasters have shown that using this method attracts concentrated access of the website in question, which frequently causes connection failures, so care must be taken about server performance and the access count.

Procedure Collaborate with public health center and healthcare/welfare departments in preparing written drafts

- To accurately pass on necessary information to the public in a set number of words using a messaging system with text length restrictions for emergency update texts/mails, you must fully refine compositions by prioritizing information items to be listed and by writing concisely, etc. When doing this, you must consult with healthcare/welfare departments about issues such as the priority of information items to be transmitted.



How do we explain COVID-19 in other languages?

~ Confusion in passing on information to resident foreigners ~

Target

● Disaster prevention managers

Critical Situation

Critical situation point

When reaching out to the public, there also is a need to pass on information in multiple languages for foreigners living locally under various circumstances; however, no translation drafts have been prepared, so we do not know how to word things suitably.

Result In the midst of a disaster, consideration had to be given to what should be put into messages for foreigners, which delayed response.

Measures

Procedure Check multilingual terminology and prepare written foreign-language drafts to pass on information in multiple languages to citizens.

- The population ratio of foreigners differs by area, but there always has been and will be a need for the provision of information at times of disaster in multiple languages (English, Chinese, Korean, Portuguese, etc.). Therefore, in the case of COVID-19 too, multilingual terminology and writing styles need to be understood/checked in advance and used to write drafts of messages for foreigners.

Procedure Collaborate with stakeholder bodies to propel transmission of information to foreigners

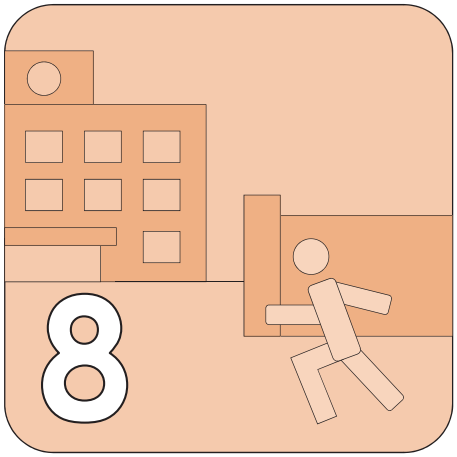
- Consider how to transmit information in multiple languages at times of emergency by collaborating with stakeholder bodies, such as working with international communication associations in your prefecture to prepare information to be transmitted to foreigners. Here, consideration must be given to the wording in multiple foreign languages and written drafts of messages must be prepared.

Procedure Consider obtaining the services of linguist volunteers during disasters

- Obtain in advance the services of linguist volunteers for times of disaster, so foreigners can be communicated with at shelters, etc., during disasters. Here, efforts should also be taken to create materials (perhaps using mechanical translation apps) on matters that ought to be passed on to foreigners about COVID-19 infections, and those materials should be distributed among the linguist volunteers in advance.

Public Relations Produce educational material for foreigners

- As time is of the essence amidst the tense situation during a disaster, it is a good idea to regularly inform foreigners in advance in multilingual materials, to facilitate simultaneous messaging in multiple languages, and so that they will accurately understand the messages passed onto them. Here, it is important to prepare precautions (guidelines) for foreigners, and distribute that material to foreigners to raise awareness.



Shelters

(designated emergency evacuation shelters and sites, etc.)

Too many evacuees in shelters, so we're in the 3Cs (Closed spaces, Crowded places, Close-contact settings!

~ Crowded shelters ~

Target

● Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

Too many evacuees are crowding into designated emergency evacuation sites/shelters, which is encouraging the 3Cs (Closed spaces, Crowded places, Close-contact settings). Among the evacuees, there are all sorts of people, including the elderly and people with underlying conditions, so there is a worry about COVID-19 infections.

Result　Risk of infections among evacuees increases.

Measures

Procedure　Seek out designated emergency evacuation sites/shelters that look vulnerable to 3Cs

- Taking into consideration the predictable numbers of people who will evacuate to designated emergency evacuation sites/shelters, the proportion of elderly in areas scheduled for evacuation, floor space sizes and width of access roads, etc., seek out the designated emergency evacuation sites/shelters that, in particular, will be vulnerable to the 3Cs and greater risk of spreading COVID-19.

Procedure　Consider space division at designated emergency evacuation sites/shelters

- In designated emergency evacuation sites/shelters, consider with facility (shelter) managers the feasibility of accommodating suspected infection cases, the elderly, the pregnant and people with underlying conditions in spaces separated from the big main shelter area, including changing rooms and classrooms that exist in the shelter facility. If utilization is possible, consider specific usage methods.

Facilities　Organize partitions for space division and consider layouts

- To avoid the 3Cs, organize partitions for space division, dividing space with infection risks in mind.

Public Relations　Call on evacuees to bring their own infection prevention shelter goods

- Make residents of areas where evacuation might be necessary thoroughly aware that they should bring their own infection prevention goods when evacuating.

Procedure　Consider methods for redistributing evacuees if, for whatever reason, 3Cs circumstances become excessive

- If, for whatever reason, the 3Cs circumstances become excessive, consider ways of redistributing evacuees, including sending some of them to less crowded shelters by bus, etc.

During Disaster Response　Control flow of people at receptions of designated emergency evacuation sites/shelters, etc.

- In responding to disasters, thoroughly implement shelter reception guidance, counting evacuees as they arrive at the entrance of designated emergency evacuation sites/shelters, and allocating them slots in the space-divided shelter to prevent space-taking confusion.

A home-isolating mild COVID-19 patient has turned up to the shelter to evacuate, what should I do?

~ Responding to home-isolating mild COVID-19 patients who have evacuated to shelters ~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

A home-isolating mild COVID-19 patient evacuated to a shelter, telling reception the he/she is a mild COVID-19 case. To prevent infection of other evacuees, some kind of isolation must be implemented.

Result　The risk of infection will increase and confusion will take hold.

Measures

Procedure　Guide mild cases to specified evacuation destinations in advance

- For people who are identified as positive and are self-isolating as mild COVID-19 cases, set specially designated evacuation destinations and provide advance guidance about them, to prevent such mild COVID-19 cases evacuating to conventional designated emergency evacuation sites/shelters.

During Disaster Response　Distinguish mild cases at receptions of designated emergency evacuation sites/shelters

- In disaster response, if a mild COVID-19 case comes to the designated emergency evacuation site/shelter to evacuate regardless of advance guidance, get that person to make a self-declaration about his/her condition at the entrance reception, and then make clear your plan of action.

Procedure　Prepare a reception sheet for listing names of evacuees

- Prepare/create a reception sheet for listing evacuee names and asking them about their health, to enable you to distinguish suspected COVID-19 symptoms at reception (arrival point) at designated emergency evacuation sites/shelters.

Procedure　Consider space division at designated emergency evacuation sites/shelters

- if a mild COVID-19 case comes to the designated emergency evacuation site/shelter to evacuate regardless of advance guidance, yet the disaster is threatening, and transferal to another evacuation destination will be predictably difficult, so you have no other option but to accept that mild case into the shelter, you will need to consult the facility (shelter) manager to see if a space separated from the big communal shelter space can be used, such as a changing room or classroom, if such a separate room can be used, then you need to consider the specific usage.

Procedure　Consider transfer methods if mild cases can be transferred to separate evacuation destinations

- if a mild COVID-19 case comes to the designated emergency evacuation site/shelter to evacuate regardless of advance guidance, and transferal to an evacuation destination that can provide isolated evacuation is possible, you must consider the method to be used to make that transfer.

I am paying attention to infection prevention, but I'm short on sanitizer and thermometers!

~ Lack of medical supplies and infection prevention goods at shelters ~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

We want to get evacuees in the shelter to take action to prevent infection by sanitizing hands and checking body temperature, but there is a lack of such medical stocks, so we cannot implement prevention measures. And, not being able to check body temperatures, means that we cannot distinguish potential COVID-19 cases or mild cases.

Result　Risk of infections among evacuees increases.

Measures

Facilities　Stockpile infection prevention goods, such as masks, sanitizer wipes and sanitizer sprays

- As much as you can, procure masks and goods that enable you to implement infection prevention measures even without using water (sanitizer, sanitizer wipes and sprays, etc.) in readiness to prevent COVID-19 infections in designated emergency evacuation sites/shelters. And, providing reception staff and other personnel who come into contact with many people with face shields is an effective way of preventing droplet infection.

Facilities　Stock up on clinical thermometers

- Stock up on clinical thermometers at designated emergency evacuation sites/shelters in order to discover people running a temperature. As contact from a clinical thermometer may spread the infection, it is best to use a non-contact thermometer.

Public Relations　Call on evacuees to bring their own infection prevention shelter goods

- Make local citizens in areas that may need to evacuate aware in advance that they should carry their own self-use infection prevention goods when evacuating.

Public Relations　Call on citizens to share their spare infection prevention goods

- Call on local citizens before the flood season begins to donate (share) their spare infection prevention goods to facilities that are designated as shelters in times of emergency. Store the gathered goods in the shelters, so that evacuees can use them at times of emergency.

Facilities　Be mindful to bolster stockpiles of water for washing hands

- Check in advance to see if designated emergency evacuation sites/shelters are in areas at risk of flooding and landslide damage as well as whether nearby water treatment/water supply facilities are vulnerable to the same risks, to find out if there is a likelihood that the water supply may get cut off at times of disaster. If there is a high risk of water supply getting cut off, stockpile in advance extra supplies of water for handwashing. If there is a shortage, you must procure some from adjacent municipalities or from volume retailers that you have agreements with.

The elderly, the pregnant and people with underlying conditions evacuating in the shelter are raising concerns about the risks of infection!

~ Growing worries about infection risks due to crowding of evacuees ~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

Lots of people have evacuated to the shelter, so crowding is occurring, and early evacuation arrivals such as the elderly and the pregnant are worried about COVID-19 and are asking if they could use separate spaces.

Result　The risk of infection will increase and confusion will take hold.

Measures

Procedure

Consider space division at designated emergency evacuation sites/shelters

- Consider with managers of facilities (shelters) the feasibility of using spaces separated from the big main shelter area, including changing rooms and classrooms that exist in the shelter facility area to accommodate the elderly, the pregnant and people with underlying conditions. If utilization is possible, consider specific usage methods.

Facilities

Consider use of partitions for space division and consider layouts

- To avoid the 3Cs, organize partitions for space division, dividing space with infection risks in mind.

Public Relations

Make the relevant residents aware of evacuation options other than designated emergency evacuation sites/shelters

- Make the elderly, the pregnant and people with underlying conditions aware prior to the flood season that they should envisage an evacuation destination other than a conventional designated emergency evacuation site/shelter, such as a friend's or relative's home. There are various methods for making them aware - conceivably, flyers could be distributed at hospitals and/or posted on noticeboards, and messages could be put in public relations pamphlet and disaster prevention emails.

During Disaster Response

Control flow of people at receptions of designated emergency evacuation sites/shelters, etc.

- In responding to disasters, thoroughly implement shelter reception guidance, checking to see if evacuees have underlying conditions or are pregnant as they arrive at the entrance of designated emergency evacuation sites/shelters, and allocating them slots in the space-divided shelter to prevent space-taking confusion.

During Disaster Response

Control flow of people by staggering process

- ･At times of disaster, smoothly controlling everything from the outset at shelter receptions is the hardest job. Nevertheless, as time elapses, the situation will calm down, enabling a steady response, so if space division is not in place, it is a good idea to stagger the process according to the situation, by dividing off space for people at high risk of becoming infected – in other words, do not be overly concerned about the initial configuration, instead, it is better to be flexible.

Someone has a really bad cough, which has led to trouble with other evacuees!

~ Due to restlessness and stress during evacuation, evacuees start to discriminate against and ostracize each other~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

People crowded into the same space in a shelter causes tension and stress, which can lead to discrimination and ostracism against people suspected of being infected with COVID-19 or other disease and against minorities.

Result　Trouble will break out among evacuees, leading to confusion.

Measures

Public Relations: Make the relevant residents aware of evacuation options other than designated emergency evacuation sites/shelters

- People suspected of being infected with COVID-19 should be steered away from evacuating to designated emergency evacuation sites/shelters by using various methods for making them aware in advance of options, such as notices on noticeboards in medical facilities and messages in public relations pamphlets and disaster prevention emails.

Procedure: Consider space division at designated emergency evacuation sites/shelters

- In designated emergency evacuation sites/shelters, consider with facility (shelter) managers the feasibility of accommodating suspected infection cases in spaces separated from the big main shelter area, including changing rooms and classrooms that exist in the shelter facility. If utilization is possible, consider specific usage methods.

Procedure: Arrange a reception sheet for listing names of evacuees

- Prepare/create a reception sheet for listing evacuee names and asking them about their health, to enable you to distinguish suspected COVID-19 symptoms at reception (arrival point) at designated shelters.

Facilities: Arrange posters and notices that call for mutual tolerance (no discrimination/ostracism)

- Arrange for posters and notices to be put up in advance which call for mutual tolerance (no discrimination/ostracism) between evacuees in designated emergency evacuation sites/shelters.

Facilities: Stockpile clinical thermometers

- Stockpile clinical thermometers in designated emergency evacuation sites/shelters in order to discover anyone running a temperature (fever). As contact from a clinical thermometer may spread the infection, it is best to use a non-contact thermometer. If a feverish person is discovered, swiftly isolate him/her in a space away from the main shelter space.

During Disaster Response: Control flow of people at receptions of designated emergency evacuation sites/shelters, etc.

- In responding to disasters, thoroughly implement shelter reception guidance, to enable you to screen out suspected COVID-19 symptoms at reception (entrance) of designated emergency evacuation sites/shelters, and allocate non-infected evacuees slots in the space-divided shelter to prevent space-taking confusion.

We lack assistance. Should we ask for support or make do by ourselves from the perspective of preventing infections?

~ Shortage of manpower at shelters due to priority being given to infection prevention ~

Target

● Managers of designated emergency evacuation sites/shelters

Critical Situation

Critical situation point

Just a manager of a facility serving as a designated emergency evacuation site/shelter and personnel are not enough for the task, but if they were to ask for extra manpower from outside, someone from among that assistance may be infected with COVID-19, which increases the risk of the virus spread.

Result　Risk of infections among evacuees increases

Measures

Procedure　Review plan to respond with limited manpower

- In usual times of disaster, just a manager and personnel are not enough to run a designated emergency evacuation site/shelter, but, under the risk of infection, asking for manpower support for other areas, may easily increase the risk of infection. Therefore, the response plan must be reviewed on the assumption that the shelter concerned will be run by a limited number of personnel without any envisaged assistance provided.

Procedure　Consider running shelters in collaboration with local communities

- When responding with just limited manpower, it is necessary to establish and run shelters with the cooperation of local citizens and volunteers. The shelter facility's manager should work with local citizens, etc., to specifically consider what kind of duties can be performed by local citizens and volunteers.

Procedure　Review shelter operation manual

- Taking into consideration the need to prevent COVID-19 infections, consideration should be given to how shelters can be established and run with the cooperation of local citizens and volunteers. And, the shelter operation manual should be reviewed to clarify the methods needed for such collaboration.

Public Relations　Make the public aware of the collaboration with local community to run shelters

- In advance, given that there is a need to prevent infections from COVID-19, make the public aware that shelters will be established and run with the cooperation of local citizens and volunteers, and look to unearth even more people who are eager to help.

Facilities　Stockpile infection prevention goods for local citizens, etc. involved in running shelters

- If local residents, volunteers and others are asked to cooperate in the establishing and running of shelters, infection prevention measures must be taken for those people.

We must have ventilation to counter the risk of infection, but if the benefits of air conditioning are negated, we could easily have cases of heatstroke!

~ Fear of heatstroke during extremely hot periods if infection prevention is prioritized ~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

From the perspective of infection prevention, ventilation of closed spaces is extremely important. Conversely, during extremely hot periods, if the power is still working, and air conditioning can be used, ventilating will counteract the benefits of air conditioning, and, perhaps, lead to greater risk of heatstroke cases.

Result　Increased risk of heatstroke cases in shelters during extremely hot periods.

Measures

Public Relations: Make the relevant residents aware of evacuation options other than designated emergency evacuation sites/shelters

- In extremely hot periods, the risk of heatstroke will increase if air conditioning is not used due to a preference for ventilating. Therefore, make people who are prone to heatstroke, such as the elderly, the pregnant and people with underlying conditions, aware prior to the flood season that they should envisage an evacuation destination other than a conventional designated emergency evacuation site/shelter, such as a friend's or relative's home. There are various methods for making them aware - conceivably, flyers could be distributed at hospitals and/or posted on noticeboards, and messages could be put in public relations pamphlet and disaster prevention emails.

Public Relations: Call on evacuees to carry heatstroke prevention goods

- In extremely hot periods, make the public aware in advance in areas that may need to be evacuated that they should carry goods, such as fans and towels, that help to counter heatstroke when they evacuate.

Facilities: Arrange equipment to counter heatstroke

- Consider arranging equipment to counter heatstroke, such as electric fans, because there will be a greater risk of heatstroke if air conditioning is not used/ineffectual due to a preference for ventilating.

During Disaster Response: Call for ventilating and hydrating given the risks of heatstroke

- In extremely hot periods, consideration must be given to heatstroke measures, such as drinking water (hydration) and periodically running air conditioning to lower room temperature of shelter, when there is a risk of heatstroke because air conditioning is not being used due to preference for ventilating.

We need to distribute food, but is it okay to boil some rice and serve it?

~ Coping with infection risks when needing to cook and serve food ~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

In cases of prolonged evacuation, food must be distributed (rice boiled and served), but, if hygiene is a problem, the risk of infection will get greater when distributing food or cooking & serving rice.

Result　Risk of infections among evacuees increases

Measures

Procedure　Check state of stockpiled low-infection-risk foods, such as individually wrapped food

- From the perspective of preventing infection from COVID-19, it is a good idea to serve individually wrapped food whenever possible. Serving boiled rice from a big pot or in reusable bowls will increase the risk of infection.. Therefore, before the flood season starts, check the state of foods already stockpiled.

During Disaster Response　Find out the health conditions of people distributing food

- Infected food distributors will expose evacuees to infection. Therefore, people involved in distributing food must have their health checked, including temperature checks and questioning on whether there are any family members and/or friends infected.

During Disaster Response　Make evacuees aware that they should face away from other people when eating & drinking

- Make evacuees aware that they should face away from other people when eating & drinking distributed food because, if there are infected person(s) present, sitting face-to-face and/or chatting over meals will increase the risk of infection among evacuees.

During Disaster Response　Avoid cues when food is being distributed

- Making evacuees cue for food will increase the risk of infection from COVID-19. Therefore, it is necessary to come up with ways to distribute food with out cueing, such as calling evacuees up by block.

During Disaster Response　Prevent infections when collecting garbage

- There is a risk of infection spread from food & drink garbage of infected evacuees, so the greatest of care must be taken, including the disposal of food & drink waste in securely sealed garbage bags. Also, if evacuees suspected of infection have been allocated separate space under the space division plan, the garbage coming out of that space must be handled with great care.

Volunteers have arrived, but – from the perspective of infection - should I let them help?

~ Dealing with volunteers who may have come from other areas ~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

Disaster areas are really grateful for the arrival of out-of-town volunteers, but if they have come from widely infected areas, the risk of infection increases.

Result　Risk of infections among evacuees increases

Measures

Procedure　Consider response to arrival of out-of-town volunteers

- Under usual disaster circumstances, disaster areas are really grateful for the arrival of out-of-town volunteers, but, in the midst of the COVID-19 pandemic, if they have come from widely infected areas, the evacuees are exposed to a greater risk of infection. Therefore, advanced consideration must be given to the policy for responding to out-of-town volunteers and the specific actions to be taken.

Procedure　Handling volunteers when their involvement is accepted

- Basically, from the perspective of preventing the spread of COVID-19, it is advisable not to accept out-of-town volunteers. However, if consideration of the matter leads you to a decision to accept them, you must thoroughly check and question them about health and contacts, including taking temperature and asking about their and family/friends' health, turning away anyone who is suspected of being infected.

During Disaster Response　Selectively screen the work that volunteers will be involved in

- In usual disaster situations, volunteers can be asked to prepare/cook and distribute food. However, amidst the COVID-19 pandemic, anyone suspected of being infected who is involved in preparing/distributing food will be putting evacuees at risk of infection. Accordingly, if you accept out-of-town volunteers, it is a good idea to ask them to carry out tasks that have relatively less contact with evacuees.

During Disaster Response　Make absolutely sure that volunteers are carrying (using) infection prevention goods

- Stockpiled infection prevention goods are for evacuees, so volunteers ought to carry their own goods, such as masks and sanitizer wipes. And, if volunteers are not carrying such goods, you have no choice but to turn them away.

The water supply is cut off, and we're lacking handwashing water!

~ Difficulty in providing handwashing water at shelter due to water supply cutoff caused by flooding ~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

Prolonged evacuation of many evacuees in a shelter increases the importance of enforced hand washing and sanitizing as well as enhanced hygiene management, but handwashing becomes difficult if the water supply is cut off because of flooding.

Result　Risk of infections among evacuees increases

Measures

Procedure　Grasp flood/landslide risks and water cutoff risks for shelters

- Check in advance to see if designated emergency evacuation sites/shelters are at risk of flooding and/or landslide damage, and also check if nearby water treatment plants and supply facilities are at high risk of having water supply cut off.

Facilities　Increase stockpiles with the need for handwashing water in mind

- As a beforehand measure, assume that there will be a handwashing water shortage due to supply cutoff, and increase stockpile of water accordingly.

Facilities　Stockpile infection prevention goods, such as sanitizer wipes and sprays

- As much as possible, procure goods that enable infection prevention without the use of water, such as sanitizer wipes and sprays, in readiness to combat water supply cutoff that will curtail handwashing and cleaning.

Procedure　Review emergency water-supply plan

- As it is vital to secure water for handwashing etc., while water supply is cut off, the emergency water-supply plan must be reviewed in advance in order to be ready for prolonged evacuations.

Procedure　Call on evacuees to carry infection prevention shelter goods

- Make residents who live in areas that may require evacuation fully aware of the need for them to carry their own infection prevention goods when evacuating.

During Disaster Response　Obtain/set up emergency water-supply that takes into consideration handwashing, etc.

- If water supply is cut off and evacuation is prolonged, obtain/set up an emergency water-supply that takes into consideration the securing of handwashing, etc.

It seems there was an infected person among the evacuees, but we don't know who the high-risk contacts are!

~ Difficulty in grasping who are high-risk contacts ~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

The public health center informed us that a person who had temporarily evacuated at our shelter later went on to test positive for COVID-19 at the health center. However, we have no record of an evacuee by the name given to us, so we do not know the space allocated to that person.

Result　The high-risk contacts of the infected person are unknown, so evacuees become worried. Also, as the used shelter space is also unclear, the entire shelter has to be disinfected.

Measures

Procedure　Prepare a reception sheet for listing names of evacuees

- Prepare a reception sheet for recording names of evacuees in readiness for tracing people if it emerges that an evacuee tests positive at a later date, making sure that evacuees write down their names and contact details, and that you record their state of health at time of evacuation, in order to make tracing easier.

During Disaster Response　Distinguish people suspected of being infected at receptions of designated emergency evacuation sites/shelters

- In disaster response, if a suspected COVID-19 case comes to the designated emergency evacuation site/shelter to evacuate regardless of advance guidance, get that person to make a self-declaration about his/her condition at the entrance reception.

- If implementing space division, record the space to be used by that evacuee and his/her state of health in the reception sheet, so that any people coming into close contact with that evacuee can be traced if necessary.

Facilities　Stockpile clinical thermometers

- If evacuation at designated emergency evacuation sites/shelters becomes prolonged, the health of evacuees may change. Therefore, stock up on clinical thermometers in order to distinguish changes in the health of evacuees. As contact from a clinical thermometer may spread the infection, it is best to use a non-contact thermometer.

During Disaster Response　Make evacuees aware of the need to record their health changes

- Make evacuees aware that they should notify the shelter reception at anytime if their health changes, such as running a high temperature.

An evacuee has died. COVID-19 is the suspected cause. What should we do!?

~ Death of evacuee suspected of COVID-19 infection ~

Target

- Managers of designated emergency evacuation sites/shelters and evacuees

Critical Situation

Critical situation point

An evacuee suspected of COVID-19 infection died while being isolated in shelter. The body needs to be dealt with quickly, but there are fears about infection.

Result　Risk of infections among evacuees increases

Measures

Procedure　Consider infection prevention action to be taken if an evacuee dies

- With a major disaster, evacuation may be prolonged and shelter environments may deteriorate, possibly leading to the deaths of evacuees in shelters. Hence, amidst the current COVID-19 pandemic, any deaths where the cause is unknown must be treated as having the potential to be COVID-19 deaths, which means consideration must be given to infection prevention measures in places serving as morgues and for handling corpses.
- In such cases, family, friends and any close contacts of the deceased must be isolated as close-contact cases.

Procedure　Confirm method used to contact public health center if someone dies at shelter

- Confirm in advance the method used to contact the public health center (also clarify procedures) if a person who has died in the shelter is suspected of infection by COVID-19.

Procedure　Review shelter operation manual

- Review and clarify procedures in shelter operation manual with regard to anyone dying in the shelter under the suspicion of infection by COVID-19.

During Disaster Response　Swiftly take measures for people who were in close contact, such as family and friends

- As people who were in close contact with the deceased, such as family and friends, become high-risk contacts, swift action must be taken to isolate them, inform the public health center and arrange for coronavirus testing (PCR test) to confirm whether or not they are infected.

Evacuees and residents at welfare facility shelter are mingling, which is increasing the risk of infection !

~ Mingling of evacuees and residents at welfare facility shelter ~

Target

● Managers of welfare facility shelters and evacuees

Critical Situation

Critical situation point

Welfare facilities are established as secondary shelters to enable the disabled and people requiring a high level of care to lead their lives while taking shelter because predictably disasters will lead to prolonged evacuation. However, such welfare facility shelters already have residents, who end up mingling with new evacuees.

Result　Risk of residents becoming infected grows due to potential infectors among the intake of new evacuees.

Measures

Facilities

Utilize space to create boundaries between normally present residents and new evacuees

- In cases where special nursing homes for the aged and other nursing homes for the elderly are used as welfare facility shelters, the facility being used as a shelter will normally have residents, who will be added to by incoming evacuees, which, in turn, will require consideration to be given to how space is used in order to prevent mingling, including the use of separate buildings, or separate floors and/or separate entrances and exits by residents and new evacuees.
- Consideration must also be given to common facilities, such as toilets, with care taken to make sure that new evacuees do not share the same common facilities as residents and staff at the welfare facility.

Procedure

Deploy staff to deal with new evacuees

- If there are COVID-19 cases mixed in with the new evacuees, and the staff taking care of the new evacuees move between new evacuee and resident spaces in welfare facility shelters, there is a potential risk of the staff spreading the infection. Therefore, decide who the staff members to look after new evacuees will be and do the utmost to prevent them having contact with the residents.

Procedure

Limit the number of and manage carers attending to evacuees

- Evacuees arriving into welfare facility shelters are sometimes accompanied by carers/family members, and allowing an unspecified large number of the public into the facility will complicate fact finding if the infection spreads for some unknown reason. Thus, a limit must be set for the number of accompanying carers, etc.

During Disaster Response

Grasp evacuee circumstances when they are being received at reception

- If evacuees are being accepted into a welfare facility shelter, make thorough checks to find out about the health of the evacuee and whether there are any family members, etc., who are infected. If there is a risk of infection, take necessary action, such as isolating the evacuee.

We're getting inquiries from homecare recipients asking for a welfare facility shelter, but all such facilities are full, so what should we do?

~ Confusion in operating welfare facility shelters ~

Target

● Homecare recipients and managers of welfare facility shelters

Critical Situation

Critical situation point

Inquiries about evacuating to welfare facility shelters came from homecare recipients living in areas where flooding had disrupted lifeline infraProcedures making evacuation to designated emergency evacuation sites/shelters difficult. However, as limits have been imposed on the number of evacuees accepted in order to prevent infection spread, the facilities in question were all full.

Result　Lack of evacuation destinations for homecare recipients, which led to confusion.

Measures

Public Relations

Make homecare recipients aware that they should consider evacuation destinations that suit them

- Conventional welfare facility shelters will lack capacity due to restrictions placed on them out of consideration of infection prevention, which may mean that requests for shelter in such welfare facility shelters by homecare recipients may be turned down due to a lack of space. Thus, they must be made aware of the need to consider alternative evacuation destinations, such as a relative's/friend's home, before disaster strikes.

Procedure

Consider evacuation destinations other than conventional welfare facility shelters

- As conventionally assumed welfare facility shelters may lack capacity, estimate how many people are likely to seek to evacuate to welfare facility shelters, and consider evacuation destinations other than conventional welfare facility shelters, such as public facilities, hotels and inns. Here, consideration must also be given to the securing of staff to deal with evacuees at those alternative shelters.

Procedure

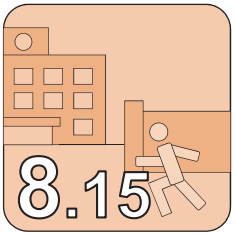
Secure forms of collaboration and movement with adjacent municipalities not suffering from disaster damage.

- When considering accepting evacuees at facilities other than conventional welfare facility shelters, a sticking point might be that there are few such facilities in the relevant area to start with. Hence, consideration must be given to asking adjacent municipalities that are undamaged or only slightly damaged to accept evacuees into their facilities. Thus, you must collaborate with those municipalities and their facilities, and consider how to secure transfer of the evacuees to those facilities.

Procedure

Collaborate with medical/health/welfare

- It is essential to collaborate with medical/health/welfare stakeholders who deal with homecare recipients on a daily basis. Those stakeholders must be collaborated with in order to consider specific evacuation destinations for homecare recipients and how they will be transferred to those destinations.



As schools move to reopen, we need to aggregate shelters, but, after that, how should we deal with shelter spaces for mild COVID-19 cases?

~ Responding to aggregation and closing of shelters ~

Target

● Managers of shelters and evacuees

Critical Situation

Critical situation point

Elementary school classrooms have been used to shelter mild COVID-19 cases in designated emergency evacuation sites/shelters, but now that schools are moving to reopen and shelters are being aggregated, nothing was decided in advance about whether we should disinfect those classrooms.

Result　Decisions need to be made on how to handle spaces used by mild cases, with time being needed to carry out disinfection of spaces, which delays the reopening of schools.

Measures

Procedure　Consider utilization plan that caters to issues up to aggregation and closure of shelters

- Amidst the COVID-19 pandemic, space division in shelters is necessary to accommodate infection circumstances among evacuees. Yet, as time elapses from disaster outbreak, those spaces need to be appropriately reorganized. Notably, mild cases scattered among multiple facilities leads to an infection risk, so it is highly necessary to aggregate those mild cases. Therefore, it is necessary to consider in advance a utilization plan that caters to issues up to aggregation and closure of shelters.

Procedure　Consider infection prevention measures, such as disinfecting spaces that mild cases have stayed in

- When closing spaces in shelters that have been occupied by COVID-19 cases and mild cases, those spaces must be appropriately disinfected to prepare them for reopening for normal use. Therefore, it is necessary to consider in advance infection prevention measures (disinfecting spaces, etc.) and procedures for reopening for normal use.

During Disaster Response　Keep a record of space occupation by mild cases, etc.

- If space division has been implemented in a shelter to deal with evacuee infections, keep a record of space occupation, including dates and infection status of evacuees using such spaces. And when such spaces are aggregated or closed, the necessary infection prevention measures must be implemented based on the record kept. Also, the use of common facilities, such as toilets, must be tracked in the same way, so that a history of use is known.

Procedure　Consider procedures for reopening spaces that have been occupied by mild cases

- If elementary school (serving as designated emergency evacuation site/shelter) classrooms have been used as spaces to shelter mild COVID-19 cases, explanations must be provided to school stakeholders and parents of students, telling them how the classrooms have been appropriately disinfected in preparation for the school to reopen. Therefore, it is necessary to consider in advance the procedures for reopening spaces that have been used as shelters.

Training Worksheet for Critical Situations in Response to Flooding

●Target and example of this worksheet

No.	Example

●Five questions for chosen example

(1) Could a similar situation occur in your local authority/department?

(2) Are necessary measures (facilities) in place to avoid the situation occurring?

(3) Are necessary measures (Procedures, manuals and plans, etc.) in place to avoid the situation occurring?

(4) Are necessary measures (Public Relations) in place to avoid the situation occurring?

(5) Are necessary measures (during response to disaster) in place to avoid the situation occurring?

Affiliation (organization)： Name：

Postscript

In this booklet (appendix), I provide cases (examples) about the risks of COVID-19 infection faced by disaster response personnel and evacuees in times of flooding amidst the COVID-19 pandemic, which puts difficulties, panic, confusion, indecision and worries on the shoulders of disaster prevention managers and the personnel who oversee the evacuation of the public.

All local governments are facing the unprecedented task of responding to disasters amidst the current COVID-19 pandemic. And, although I do not guarantee that this booklet has all the answers in its examples, I do hope that they offer hints as to what measures need to be considered in line with the situations in each individual local government and the prevalence of infection in areas.

Keeping in mind the stages that need to be worked through before wide-area support personnel arrive, please note that the disaster phase that this booklet deals with is the period from before the disaster outbreak up to the opening of shelters, it does not include life rebuilding assistance and recovery work.

Further, the cases in this booklet are based on knowledge in Japan at time of publishing – hence, the contents of this booklet must be updated as needed.

In compiling this booklet, I referred to the documents listed on the next page, and I would like to take this opportunity to express my gratitude for the guidance they gave me.

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June 2020

Critical Situations during Flood Emergency Response
(Appendix: Local Government Response under COVID)
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(Appendix: Local Government Response under COVID-19)

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