Business Continuity Management
&
Safety Management System

Okinawa Institute of Science and Technology Graduate University
Approved by the President, Peter Gruss, May 26, 2018
Introduction

This volume compiles the Business Continuity Management & Business Continuity Plan that allow an organization to recover its business as fast as possible when encountered with a natural disaster or emergency situation, and Safety Management System that prevents accidents (resulting in property damage, personal injury or death) and incidents (occurrences that are close to but not exactly accidents) that occur when people carry out business activities, and aims to minimize the damage to organizations and people, ensure continuity of business, protect the environment and properties and secure safety for the people engaged in education and research activities at the time of disaster.

Earthquakes, new strains of influenza, etc. causing a wide-range, long-term impact on the functionality of OIST are covered by the most important Business Continuity Plan, while typhoons, fatal and injury accidents arising out of research activities, bomb threats through calls, the crash of military planes to OSIT campus, terrorism, the launch of a missile by a foreign country and fire causing a limited and short-term impact are covered by the important Business Continuity Plan.

If damage exceeding the assumption mentioned in this volume occurs in the important Business Continuity Plan, there is a need to apply “roles of the Earthquake Management Headquarters and respective teams” of the Earthquake Response Business Continuity Plan correspondingly and respond to it flexibly.
## Revision record

<table>
<thead>
<tr>
<th>Number</th>
<th>Date of issue</th>
<th>Remarks</th>
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<td>21</td>
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</tbody>
</table>
Earthquake

(including Tsunamis)
Business Continuity Management for
Coping with Earthquakes

In Japan, when major disasters, such as the Great East Japan Earthquake, occur, causing serious damage to people, property, and the environment, it is often concluded that "disaster was an unexpected event and out of control.” Business Continuity Plan (BCP) and Business Continuity Management (BCM) in this volume have been created with an aim of making BCP and BCM that can cope with even unexpected events.

The assumptions and responses in this BCP incorporate many lessons from past major disasters that occurred in Japan (e.g. The Great Hanshin Awaji Earthquake: Seismic intensity 6 in Kobe City, The Great East Japan Earthquake(Magnitude 9.0): Seismic intensity 7 in Kurihara City, Miyagi Prefecture, Kumamoto Earthquake: Seismic intensity 7 in Mashikimachi, Kumamoto City) and chronologically state what actions faculty, faculty staff, students, family members and visitors of OIST should take to ensure their own safety at the time of disaster and what procedures are to be followed after the disaster to continue the business at the shortest.

This volume mentions the BCP and BCM (earthquakes, new strains of influenza), and clearly describes the activities necessary for continuation of the business in regular times as well as in emergency at the time of disaster.

As a simplified version summarizing the procedure and main points of this volume on one A4 size paper sheet has been attached as an appendix, it is recommended to carefully read this volume after grasping the outline and procedural flow of the BCP from the simplified version.

Emergency response to actual disasters is demonstrated by what is acquired from daily training. Therefore, it is important to periodically educate and train staff about the main process and content of this BCP.

In case flaws are found in the content of this volume after the actual occurrence of a disaster or training, this BCM includes conducting education and training again after investigating and analyzing those flaws and incorporating the improved points in this BCP.

Basic Policy
At the time of disaster, we will ensure the safety of lives and bodies of faculty, faculty
staff, students, family members, visitors and Tancha residents gathered in shelter for affected residents, the conservation of assets in the university and continue or resume promptly education and research activities.

**Objectives**

1. To grasp the safety of faculty, faculty staff, students, family members and visitors, and damages to them within one day
2. To promptly grasp the damage situation of central buildings, research buildings, educational facilities, etc. and usability of research buildings, and resume the education and research activities within 3 weeks (Recovery Time Objective).
3. To provide food, clothes and shelter necessary for victims (including faculty, faculty staff, students, family members, visitors and Tancha residents).
4. Delay of important events, such as enrollment in and completion of OIST, should be reduced to the minimum.

**Estimation of damage**

For estimation of damage, we referred to the reference material on lessons from the Great Hanshin-Awaji Earthquake, the Great East Japan Earthquake and Kumamoto Earthquake Lesson published by the Cabinet Office and Regional disaster prevention plans of Okinawa Prefecture published by the same prefecture, etc., and assumed that an earthquake of lower 6 seismic intensity was detected at OIST. Also, the date of assumed damage is not mentioned, as it is impossible to forecast the occurrence of a disaster (earthquake), and estimation was made separately for weekdays (working time) when the number of people present at the campus is the largest and for nighttime/holidays (off-duty hours) when the number of people is the least.

<table>
<thead>
<tr>
<th>Building damage, Fire</th>
<th>Damage situation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>【Regional damage】</td>
</tr>
<tr>
<td></td>
<td>There were the major outbreak of fire and the destruction of houses in wide areas of Uruma City, Okinawa City and Onnason.</td>
</tr>
<tr>
<td></td>
<td>【Damage to central buildings/research buildings】</td>
</tr>
<tr>
<td></td>
<td>Some parts of the 2nd research building got cracks.</td>
</tr>
<tr>
<td>Troubles in transportation</td>
<td>Some main roads (Japan National Route 58) were closed as they were damaged.</td>
</tr>
</tbody>
</table>
infrastructure

<table>
<thead>
<tr>
<th>Troubles in lifelines</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional damage</strong></td>
<td>Outage of water, electricity and gas, and decline in some functionalities of telephone communication.</td>
</tr>
<tr>
<td><strong>Damage to OIST</strong></td>
<td>Outage of water, electricity and gas at an entire OIST, and decline in some functionalities of telephone communication.</td>
</tr>
</tbody>
</table>
| Human damage, etc.   | · Landslide occurred at the slope near the South Hill (residential area)  
                         · There were casualties in the OIST campus.  
                         · Tsunami (wave height of approx. 20 m) hit after the earthquake, causing damage to buildings and facilities established near the coast, such as Okinawa Marine Science Station and Seaside House. |

**Assumptions for restoration of lifelines**

For restoration periods, we referred to the records of the Great Hanshin-Awaji Earthquake and Kumamoto Earthquake.

<table>
<thead>
<tr>
<th>Waterworks</th>
<th>Electricity</th>
<th>Gas</th>
<th>Landline phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx.16 days</td>
<td>Approx.3 day</td>
<td>Approx.15 days</td>
<td>1-2 weeks</td>
</tr>
</tbody>
</table>

【The Great Hanshin-Awaji Earthquake】
At 5:46 on 17th January, 1995, an earthquake of magnitude 7.3 with the epicenter 16 kilometers deep in northern Awaji Island occurred. A wide range of areas from Tohoku to Kyushu region felt the shake. For example, 6 seismic intensity in Kobe and Sumoto, 5 seismic intensity in Kyoto and 4 seismic intensity in Osaka, Himeji, Wakayama, etc. were observed due to this earthquake. Also, as a result of a damage investigation conducted right after the earthquake by the earthquake mobility observation team of the Meteorological Agency, it was found that seismic intensity was 7 in some areas of Kobe City. 6,345 people died, and more than 249,180 houses were fully or partially damaged. 7,036 houses were burned down by fires.

【Kumamoto Earthquake】
Earthquakes of magnitude 6.5 at 21:26 on 14th April, 2016 and magnitude 7.3 at 1:25 on 16th of the same month occurred continuously, and mainly Mashikimachi in Kumamoto City was hit by 7 seismic intensity twice. 49 people died, and more than 40,021 houses were fully or partially damaged.

【Restoration of Waterworks】
The Great Hanshin-Awaji Earthquake: It took about 1 month. Meanwhile, the administration restricted the usage of water storage tank.

Kumamoto Earthquake: Water supplies were restored in about 16 days.

【Restoration of Electricity】

The Great Hanshin-Awaji Earthquake: It was restored in about 7 days. (After emergency restoration ended on 24th January, work shifted to temporary and full-scale restoration.)

Kumamoto Earthquake: It was restored in about 1 day. (It was restored in about one day when the earthquake occurred on 14th April, but as another earthquake occurred on 16th, it was restored at 19:10 on 20th April. Electricity was supplied as usual at Kumamoto University (Kumamoto City). (15 cases of fire occurred, of which 8 cases were of electrical fires.)

【Restoration of Gas】

The Great Hanshin-Awaji Earthquake: It was restored in 94 days (857,000 houses). (65.2% restored by the end of February and 96.8% restored by the end of March; restoration work was completed on 11th April except in some areas, and gas supply was resumed completely by 22nd April except for absent customers.)

Kumamoto Earthquake: It was restored in 15 days (101,000 houses).

【Restoration of Landline】

The Great Hanshin-Awaji Earthquake: It was restored in 1-2 weeks. (Emergency restoration of the telephone line was completed at the end of January, except for the destructed and burnt houses. The restoration of the dedicated line also ended almost at the same time)

Roles of EMHs and each team

1. Establishment of EMHs and Core Group Members

If it is announced on TV/radio/website, etc. that there was a shake of 6 seismic intensity or above near the OIST campus, Earthquake Management Headquarters (EMHs) will be established automatically. Core Group Members of EMHs meet at the President Office.

In principle, EMHs will not be established if seismic intensity is 5 or less. However, when receiving notification from Bosai-center (Disaster prevention center) that the damage has occurred at OIST, ERC consult with Core Group Members on the establishment.

2. Structure of the Organization

EMHs consist of all Vice-Presidents and General Counsel. The President, EVP, COO and ERC constitute Core Group Members of EMHs and quickly handle urgent issues and make decisions.

Responses to earthquakes are based on the duty allotment table and text of this BCP.
The main information from each team is summarized by the Supervisory Department. After adjusting this information, the Department reports it to Core Group Members and gives advice. Based on the advice, Core Group Members give directions for appropriate responses.

Matters decided by Core Group Members are directly communicated to EMHs and then to the OIST Community by the Information Team.

In this Earthquake Response Business Continuity Plan, earthquake countermeasure personnel are staff members excluding the members of EMHs, Core Group Members, Supervisory Department and the person in charge of each team.

3. Members of Core Group, EMHs, Supervisory Department and each team, and their duties (Lists are separately sent to concerned parties)

① Core Group Members and EMHs

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Post/Name/telephone/e-mail</th>
<th>Main duties</th>
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<tbody>
<tr>
<td>Core Group Members</td>
<td></td>
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<tr>
<td>President</td>
<td>○○○○</td>
<td>1. Decide on attendance/leaving of faculty, faculty staff</td>
</tr>
<tr>
<td>Executive Vice-President</td>
<td>○○○○</td>
<td>2. Decide on temporary closure of class</td>
</tr>
<tr>
<td>Chief Operating Officer</td>
<td>○○○○</td>
<td>3. Make disaster recovery plan</td>
</tr>
<tr>
<td>Emergency Response Coordinator</td>
<td>○○○○</td>
<td>4. Decide on the request for relief supplies</td>
</tr>
<tr>
<td>EMHs</td>
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</tr>
<tr>
<td>Provost</td>
<td>○○○○</td>
<td>5. Decide on the request for dispatch of doctors for casualties</td>
</tr>
<tr>
<td>Dean of Graduate School</td>
<td>○○○○</td>
<td>6. Decide on the request for visit and dispatch of medical/health/welfare professionals</td>
</tr>
<tr>
<td>Dean of Faculty Affairs</td>
<td>○○○○</td>
<td>7. Review and decide on recovery policy (restart of business)</td>
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<td>8. Decide on the dissolution of EMHs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Preparation and preservation of records relating to the implementation of</td>
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</tbody>
</table>
VP for Information Technology
VP for Financial Management
VP for Gender Equality & Human Resource Development
VP for Buildings and Facilities Management
VP for Communication & Public Relations
General Counsel

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Post/Name/telephone/e-mail</th>
<th>Main duties</th>
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</thead>
</table>
| Leader             | Emergency Response Coordinator | 1. Summarizing the information on safety confirmation  
                     | ○○○○                                                          | 2. Summarizing the information on human earthquake countermeasures by EMHs |

② Supervisory Department (ERC, Facility Management Section, Occupational Health and Safety Section, Gender Equality & Human Resource Development Division, Communication and Public Relations Division and IT Division)
### Information Team (Gender Equality & Human Resource Development Division, Student Support Section, Communication and Public Relations Division)

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Post/Name/telephone/e-mail</th>
<th>Main duties</th>
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</thead>
<tbody>
<tr>
<td><strong>Leader</strong></td>
<td>Gender Equality &amp; Human Resource Development Division ○○○○</td>
<td>1. Aggregation of safety confirmation information (Secom Safety Confirmation System, <a href="mailto:disaster@oist.jp">disaster@oist.jp</a>, report from vendor, main reception)</td>
</tr>
<tr>
<td><strong>Sub-leader</strong></td>
<td>Students Support Section ○○○○</td>
<td>2. Notice of temporary closure, resumption of class, etc.</td>
</tr>
<tr>
<td><strong>Member</strong></td>
<td>Gender Equality &amp; Human Resource Development Division ○○○○</td>
<td>3. Notice of change in event schedule, etc.</td>
</tr>
<tr>
<td></td>
<td>Gender Equality &amp; Human Resource Development Division ○○○○</td>
<td>4. Collection of information related to earthquakes from TV, radio, internet, etc.</td>
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<td>Students Support Section ○○○○</td>
<td>5. Establishment of a desk for receiving donations from inside and outside Japan</td>
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<td>Students Support Section ○○○○</td>
<td>6. Support in procedures of transporting bodies to home countries</td>
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<tr>
<td></td>
<td>Students Support Section ○○○○</td>
<td>7. Communication of matters decided by</td>
</tr>
</tbody>
</table>
### Facility Team (Facility Management Division, Okinawa Building Maintenance (OBM))

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<thead>
<tr>
<th>Personnel</th>
<th>Post/Name telephone/e-mail</th>
<th>Main duties</th>
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</table>
| Leader    | Facility Management Division ○○○○ | 1. Investigation of damage to buildings, facilities and land  
2. Check for fire, gas leakage, water leakage, etc.  
3. Rescue activity in case of confinement in an elevator  
4. Operation of emergency generators  
5. Indication of dangerous places  
6. Implementation of building inspection using “Building emergency checklist”  
7. Assessment of restoration of buildings, laboratories, meeting rooms, etc.  
8. Preparation for the restoration of infrastructure  
9. Budget request for restoration of facilities and equipment (in cooperation with Research Support Division and Financial Management Division)  
10. Preparation and preservation of records relating to the implementation of earthquake countermeasures by Facility Team |
| Sub-leader| Facility Management Division ○○○○ | |
| Member    | Facility Management Division ○○○○ | |
|           | Facility Management Division ○○○○ | |
|           | Facility Management Division ○○○○ | |
|           | Facility Management Division ○○○○ | |
|           | Facility Management Division ○○○○ | |
|           | OBM ○○○○ | |
|           | OBM ○○○○ | |
|           | OBM ○○○○ | |
|           | OBM ○○○○ | |
|           | OBM ○○○○ | |
|           | OBM ○○○○ | |
### 5. Rescue Team (Health Center, Clinic, Ganjuu and Facility Management Division)

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<thead>
<tr>
<th>Personnel</th>
<th>Post/Name/telephone/e-mail</th>
<th>Main duties</th>
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</thead>
</table>
| Leader    | Health Center ○○○○         | 1. Rescue of casualties, first aid  
|           |                             | 2. Establishment of first-aid stations and  
|           |                             | reception space for medical patrol  
|           | Sub-leader Facility Management Division ○○○○ | 3. Mental and physical health maintenance  
|           |                             | of faculty, faculty staff, students and  
|           | Health Center ○○○○         | family members  
|           | Health Center ○○○○         | 4. Taking measures for bodies in  
|           |                             | cooperation with the administration  
|           | Health Center ○○○○         | (securing mortuaries, preparation of  
|           |                             | body bags, etc.)  
|           | Health Center ○○○○         | 5. Preparation and preservation of records  
|           | Health Center ○○○○         | relating to the implementation of  
|           | Member Ganjuu ○○○○         | earthquake countermeasures by Rescue  
|           | Facility Management Division ○○○○ | Team  
|           | Facility Management Division ○○○○ |  
|           | Facility Management Division ○○○○ |  
|           | Facility Management Division ○○○○ |  

### 6. Health and Safety Team (Occupational Health and Safety Section, Office of DoR, and other Research Support Section)

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<tr>
<th>Personnel</th>
<th>Post/Name/telephone/e-mail</th>
<th>Main duties</th>
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</thead>
</table>
| Leader           | Office of DoR ○○○○          | 1. Check and inspection of the damage  
|                  |                             | situation of research equipment  
|                  |                             | (including machinery and tools),  
|                  | Sub-leader Occupational Health and Safety Section ○○○○ | abnormalities in hazardous materials |
1. Support desk for faculty, faculty staff, and students affected by the disaster
2. Acceptance and registration of affected residents
3. Establishment of victim consultation desks
4. Acceptance and management of relief supplies in cooperation with ERT
5. Acceptance of volunteers
6. Management of the shelter for affected residents
### IT Team

<table>
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<tr>
<th>Personnel</th>
<th>Post/Name/telephone/e-mail</th>
<th>Main duties</th>
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</thead>
<tbody>
<tr>
<td><strong>Leader</strong></td>
<td>IT Division ○○○○</td>
<td>1. Securing information system backup data</td>
</tr>
<tr>
<td><strong>Sub-leader</strong></td>
<td>IT Division ○○○○</td>
<td>2. Taking measures when a problem occurs in IT</td>
</tr>
<tr>
<td><strong>Member</strong></td>
<td>IT Division ○○○○</td>
<td>3. Preparation and preservation of records relating to the implementation of earthquake countermeasures by IT Team</td>
</tr>
</tbody>
</table>

7. Preparation and preservation of records relating to the implementation of earthquake countermeasures by Victim Support Team.
Emergency Response Team (ERT: Emergency Response Team; OBM)

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Post/Name/telephone/e-mail</th>
<th>Main duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader</td>
<td>Chief Security Officer of OBM</td>
<td>1. Initial firefighting, reporting to fire department, emergency broadcasting and giving instructions on evacuation on campus at the time of fire</td>
</tr>
<tr>
<td></td>
<td>○○○○</td>
<td></td>
</tr>
<tr>
<td>Sub-leader</td>
<td>OBM ○○○○</td>
<td>2. Rescue activity in case of confinement in an elevator (in cooperation with Facility Team)</td>
</tr>
<tr>
<td></td>
<td>OBM ○○○○</td>
<td>3. Patrol of shelter for affected residents</td>
</tr>
<tr>
<td></td>
<td>OBM ○○○○</td>
<td>4. Assistance for Victim Support Team (acceptance of relief supplies) and Facility Team (confirmation of fire, gas leakage, etc.)</td>
</tr>
<tr>
<td></td>
<td>OBM ○○○○ ○○○○</td>
<td>5. Preparation and preservation of records relating to the implementation of earthquake countermeasure by the Emergency Response Team</td>
</tr>
</tbody>
</table>

Measure to be taken during off-duty hours

When a disaster occurs during off-duty hours, such as nighttime, early morning and holidays, Emergency Response Team (OBM) is to carry out the following earthquake response operation on behalf of the staff in charge until they assemble.

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Post/Name/telephone/e-mail</th>
<th>Main duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader</td>
<td>OBM Chief on duty</td>
<td>1. Rescue of injured people, first aid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Current state report to emergency response coordinator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Initial firefighting activity at the time of fire</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Other emergency responses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Preparation and preservation of records relating to the implementation of earthquake countermeasures during off-duty hours by the Emergency Response Team</td>
</tr>
<tr>
<td>Sub-leader</td>
<td>OBM Deputy chief on duty</td>
<td></td>
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<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>Member</td>
<td>OBM ○○○○ ○○○○</td>
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</tbody>
</table>
### Order of substitution of Earthquake Management Headquarters, Supervisory Department and the responsible person of each team

<table>
<thead>
<tr>
<th>Earthquake Management Headquarters</th>
<th>Order of substitution of duties</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target people of substitution of duties</td>
<td>First Name/telephone/e-mail</td>
<td>Second Name/telephone/e-mail</td>
</tr>
<tr>
<td>President</td>
<td></td>
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<tr>
<td>Executive Vice President</td>
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<td></td>
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<tr>
<td>Chief Operating Officer</td>
<td></td>
<td></td>
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<tr>
<td>Dean of Research(Provost)</td>
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<tr>
<td>Dean of Graduate School</td>
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<td>Dean of Faculty Affairs</td>
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<tr>
<td>Vice President for Information Technology</td>
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<td>Vice President for Financial Management</td>
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<tr>
<td>Vice President for Gender Equality &amp; Human Resource Development</td>
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<tr>
<td>Vice President for Buildings and Facilities Management</td>
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<tr>
<td>Vice President for Communication &amp; Public Relations</td>
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</tr>
<tr>
<td>General Counsel</td>
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<tr>
<td>Supervisory Department</td>
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<td>Facility Management Section</td>
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<td>Occupational Health and Safety Section</td>
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<td>Information Team</td>
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<td>Facility Team</td>
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<td>Rescue Team</td>
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<td>Health and Safety Team</td>
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<td>Victim Support Team</td>
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<td>IT Team</td>
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<tr>
<td>Emergency Response Team</td>
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</tbody>
</table>

**Action standards for all faculty staff/students**

All faculty, faculty staff and students are to follow the actions mentioned below. While paying attention to the latest information released on the OIST website, students are to volunteer in supporting victims at the OIST campus or outside OIST campus and contribute to regional rescue and reconstruction activities.

<table>
<thead>
<tr>
<th></th>
<th>Within working hours</th>
<th>Nighttime/holiday</th>
<th>From the 2nd day on</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>On Campus</td>
<td>When commuting to work or going out</td>
<td>Attendance at work upon safety confirmation, in principle</td>
</tr>
<tr>
<td>Earthquake Management Headquarters, Supervisory Department, faculty staff appointed to each team</td>
<td>Participate in response activities</td>
<td>Attendance at work upon safety confirmation, in principle</td>
<td>Attendance at work upon safety confirmation, in principle</td>
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</tbody>
</table>
Students and faculty staff other than the above | Return home upon safety confirmation, in principle | Return home upon safety confirmation, in principle | Stand by at home | Attendance upon safety confirmation, in principle |
-----|-----------------|-----------------|----------------|-----------------|
Visitor | Instruct to return home upon safety confirmation | _ | _ | _ |

**Emergency Priority Operations (created and kept by each Section)**

<table>
<thead>
<tr>
<th>Name of Section</th>
<th>Work proprieties in emergency</th>
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<tbody>
<tr>
<td>In charge of ___</td>
<td>Work to be curtailed/cancelled</td>
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<tr>
<td>In charge of ___</td>
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</tbody>
</table>

**Contact list of relevant bodies (created and kept by each Section)**

<table>
<thead>
<tr>
<th>Category</th>
<th>In emergency</th>
<th>At normal time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Name of organization</td>
<td>Contact</td>
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<tr>
<td>Administrative agency</td>
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<td><a href="mailto:123@xxx.jp">123@xxx.jp</a></td>
</tr>
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<td>University</td>
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<tr>
<td></td>
<td>Business partner</td>
<td>Associate Company</td>
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</table>
Business Continuity Plan for Earthquakes (Plan)

Phase 1

Immediate Action following an Earthquake of 6 Seismic Intensity or Above

This section describes what action to take when a massive earthquake hits.

When an Earthquake Hits

If you are on the OIST Campus

1. Ensure the safety of your own life.
   See *1: (Techniques to ensure safety)

2. The general rule is to stay inside a safe building in the event of an earthquake, but should the building be damaged (such as the collapse of the ceiling, the semi-collapse of the ceiling, the distortion of a wall or a pillar, and cracks) due to the quake, or there is a possibility of such damage, you should evacuate to the designated on-campus evacuation area (the area used in the event of fires).

3. If an earthquake hits while you are using fire, gas, or other hazardous objects, first ensure your own safety and after the shaking has subsided, switch off the power, turn off the gas at its source, and stow any hazardous objects in a secure case or container.

4. In the event you discover an injured person, let the people in the vicinity know, aid the injured person and carry them to a safe location.
   See *2: (What to do in the event you discover an injured person)
   See *3: (Disaster Response Equipment)

5. Confirm the safety of family members.
   See *4 (Confirming Safety)

6. Faculty, faculty staff and students should send safety confirmation information to the Information Team via the Secom Safety Confirmation system or via email by cellphone, PC (Email: disaster@oist.jp)
   See *5: (Contact information for sending safety confirmation information to Earthquake Management Headquarters)

7. Vendors and security company etc. are to provide safety confirmation information of their employees to Information team. The personnel at Main Reception is to
provide information of visitors (name list) to Information Team.

*1 (Techniques to Ensure Safety)

- Ensure your safety by taking cover under something such as a robust desk or table until the earthquake subsides.
- Keep in mind that unsecured desks, tables, etc. may move as the earthquake shakes.
- Earthquakes can continue to shake for more than a minute depending on the intensity of the quake.
- Do not leave the building unnecessarily as there is a danger of being injured by glass, falling objects, etc.

*2 (What to do in the event you discover an injured person)

- Let the people in the vicinity know of your discovery and with the help of faculty, faculty staff and students, aid the injured person while sending information regarding the situation along with the safety confirmation information.
- Hand over the injured person to EMHs Rescue Team.

*3 (Disaster response equipment)

- Keep equipment used in case of emergencies (crowbar, torch/flashlight, first aid kit, rope, rubber gloves, gloves, bandages, stretcher etc.,) on each floor of every research building, each floor of the Centre Building, the Village Centre, Seaside House and the OIST Marine Science Station etc.

*4 (Safety Confirmation)

- Regularly decide on family safety confirmation methods with your family.
- Utilize all means of family safety confirmation available to your family. All means include mobile phones (calling and email), PC’s, public telephones, and safety confirmation systems of all providers.
- Safety confirmation information should be sent to OIST via the Secom Safety Confirmation system after confirmation of your own safety. When you are unable to use this system, safety confirmation information should be sent to the Information Team via any means available to you, such as mobile phones (email, LINE) and PC's (email, LINE, Skype).
- Safety confirmation information includes at least your name, your safety, your family’s safety, and your location.
- For visitors, the person in charge of your group should email safety confirmation information to the Information Team.

*5 (Contact details for sending safety confirmation information to the Information Team.)

- Email: disaster@oist.jp

If You are Near the Coast (including OMSS, Seaside Houses and homes that are near the coast)
1. Ensure your own safety.
2. In the event you discover an injured person, let the people in the vicinity know, aid the injured person and carry them to a safe location.
3. If an earthquake hits while you are using fire, gas, or other hazardous objects, first ensure your own safety and after the shaking has subsided, switch off the power and turn off the gas at its source.
4. In the event a tsunami warning, especially Major Tsunami Warning with Huge Tsunami (Ou Tsunami Kiehou, Kyodai Tsunami), is issued, quickly evacuate to the tsunami evacuation area or tsunami evacuation building designated by your local government. As the roads will be congested, do not use a car. There is a possibility of a tsunami occurring with earthquakes with a seismic intensity of lower 6.
   See *1 (What action to take when staying near the coast)
   See *2 (Tsunami advisories & warnings)
5. Confirm the safety of your family.
6. Faculty, faculty staff and students should send safety confirmation information to the Information Team via the Secom Safety Confirmation system or via email by cellphone, PC (Email: disaster@oist.jp).
7. Return to OMSS, homes, or the like, after the tsunami warning has been cancelled.

*1 (Action to take when staying near the coast)

- When working at the OIST Seaside House or the OIST Marine Science Station, or near the coast (including when living near the coast), tsunami information (information regarding the occurrence of tsunamis, tsunami height, time of landfall) can be acquired regularly via TV, radio etc. Tsunamis can occur even in cases where the earthquake occurs in a location far away from Japan. Also, when an earthquake occurs near the coast, a tsunami can make landfall within a short period of time.
- When an official tsunami advisory is issued, people swimming in the ocean are to get out of the ocean and get away from the coast.

*2 (Tsunami advisories & tsunami warnings)

- A tsunami advisory issued by the Meteorological Agency is “a prediction that calls for caution when there is a possibility of a disaster” and is issued when the height of the tsunami is between 0.2 m and just under 1 m.
- A tsunami warning is “a prediction that calls for vigilance when there is a possibility of a serious disaster” and is issued when the height of the tsunami is between 1 m and just under 3 m. A large tsunami warning is issued when the height of the tsunami is over 3 m. If a Major Tsunami Warning or a tsunami warning is issued using the phrases “Huge Tsunami” or “High Tsunami,” there is a
possibility a huge tsunami similar to the Great East Japan tsunami (over 30 m in some places) will hit. (The Japan Meteorological Agency website, 2018)

**If you are out at sea near Japanese cost (including when conducting research out at sea)**

1. When out at sea, you should constantly acquire information on tsunamis via the radio. Should you learn of an official issuance of a tsunami warning and the tsunami’s time of arrival, and should you be able to do so within a safe amount of time as described in the next point, stop operations such as diving, dock at the nearest harbor and evacuate to the designated tsunami evacuation area or evacuation building.

2. You are considered to have a safe amount of time when the amount of time it takes the tsunami to reach the nearest harbor after the tsunami warning has been issued is longer than the time it takes the people diving to board the boat and for that same boat to get to shore and for those on the boat to reach the evacuation area or evacuation building.

3. When you cannot make it back within a safe amount of time, escape offshore as far as possible. It is difficult to do safely in small vessels (diving boats come under small vessels) near the coast.

   See *1 (What actions to take when conducting research out at sea)

4. Regarding the evacuation process, if there are instructions from the Japan Coast Guard, follow those instructions.

5. Confirm the safety of your family.

6. Faculty, faculty staff and students should send safety confirmation information to the Information Team via the Secom Safety Confirmation system or via email by cellphone, PC (Email: disaster@oist.jp).

7. Return to the evacuation harbor after the tsunami warning has been cancelled.

*1 (What actions to take when conducting research out at sea)

- When conducting research operations out at sea, constantly acquire tsunami information by radio, etc.
- Tsunami advisories and warnings issued by the Meteorological Agency will be sent to mobile phones via email.
- On the coast, governing bodies will make official announcements such as tsunami warnings via emergency radio broadcasting systems and PA vehicles.
- The captain and persons in charge of the research at sea should always, in advance, research and integrate into their research plans methods of acquiring tsunami advisories and warnings,
the harbor nearest to their place of research, tsunami evacuation areas and buildings, and the safe amount of time required to reach them.

**Establishment of the Earthquake Management Headquarters and Initial Response**

To establish EMHs and take emergency action.

**Establishment of the EMHs**

1. If an official announcement of an earthquake with a seismic intensity of 6 or over in the vicinity of the OIST campus (Onnason, Kin-cho, Uruma city) is made on the TV, radio, etc., EMHs is to be automatically established and its Core Group Members meet at President Office.
   See *1 (Location for Establishing EMHs and Order of Priority for Acting Personnel)

2. Members of EMHs, Supervisory Department, and leaders of each team are to gather at A150 (wearing helmets if it is considered necessary from the situation). All other personnel (from all teams) are to gather at their posts.

3. The Information Team will announce the establishment of EMHs to the OIST community on OIST website or via the Secom Safety Confirmation system.

*1 (Location for Establishing EMHs and Order of Priority for Acting Personnel)

- In the event the designated room is damaged, after confirming it is safe Facility Team will decide the substitute room.
- Building safety confirmation is to be carried out based on the “Check sheet for Safety Inspections” in the “Guidelines on Emergency Inspections by Facility Administrators Immediately following Large-Scale Earthquakes”.
- The “Guidelines for Emergency Inspections of Buildings by Facility Managers and Other Personnel Immediately following the Occurrence of Large-Scale Earthquakes” are guidelines for emergency and urgent safety confirmation of buildings conducted by building managers and other personnel before the arrival of architectural specialists.
- When a disaster occurs, assemble based on the order of priority for acting personnel in the event of long-term absence of members of EMHs, Supervisory Department, and/or leaders of each team.

*2 (Assembling During Off-Duty Hours)

- If an earthquake occurs in the night/on your day off/on a public holiday, after ensuring your own
safety and confirming the safety of your family members and others, members of EMHs, Supervisory Department, and leaders of each team are to gather at A150 if you believe it is possible to get to the OIST campus from your home via car, motorcycle, bicycle, or on foot. Earthquake Management Personnel are to gather at the designated area (as a general rule, this will be your usual post).

- Taking into consideration the fact that the OIST campus is on elevated ground and the road could be damaged due to landslides, refrain when possible from assembling at night and assemble once you are able to confirm your surroundings with your own eyes.
- Earthquake Management Personnel that are unable to assemble should await orders from home and engage in local relief activities while staying in contact with the Information Team for the time they are unable to assemble.

**Initial Response by EMHs**

1. Supervisory Department is to report the establishment of EMHs to Ministry of Education, Culture, Sports, Science and Technology (MEXT), Cabinet Office and Okinawa Prefecture.
2. Each team is to conduct earthquake response and emergency priority operations based on the Emergency Priority Operations table. See *1(Emergency Priority Operations) *2 (Break Areas & Napping Stations) *3 (Emergency Response During Off-Duty Hours)
3. For means of communication between EMHs, Supervisory Department, and each team leader, use radios and email. For communication between Supervisory Department and the administration (national, prefectural, municipal), use satellite phones, emails and telephones.
4. Information from inside and outside the campus will be gathered into EMHs. EMHs will put up the disaster recovery plan inside EMHs and keep it updated with factual information at all times. See *4 (Disaster Recovery Schedule)

*1(Emergency Priority Operations)

- In the event of a disaster, each team will be extremely busy with responding to said disaster and will be unable to perform regular duties. Each team should clarify essential duties in advance and carry them out alongside disaster response.
- Bear in mind that emergency priority operations will continue for approximately 1 month following a disaster.
- In the event a disaster occurs around the time of school enrollment, course completion, or job
hunting season, operations should be carried out so as not to interrupt these.

*2 (Break Areas & Napping Stations)

- For EMHs, Supervisory Department and each team leader, break areas and napping stations are to be set up near EMHs.
- Break areas and napping stations for Earthquake Management Personnel not mentioned above will be designated by each team leader.

*3 (Emergency Response During Off-Duty Hours)

- If an earthquake occurs in the night/on days off/on public holidays, EMHs’ initial/emergency response will be conducted by the Emergency Response Team.
- Urgent operations will be conducted by the limited available personnel, but regular personnel shall take over upon arrival.

*4 (Disaster Recovery Schedule)

- The disaster recovery schedule showing disaster recovery in chronological order is to be made available to be viewed on PC’s by faculty, faculty staff and students.

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**Phase 2**

**Assessment of the Damage Situation and Secondary Disaster Prevention**

Prevent the spread of secondary disasters by fully understanding the damage situation and hazardous areas and taking measures to set up evacuation directions and restricted areas. When strong aftershocks hit, stop activities and ensure safety.

**Damage Assessment and Responding to the Fire Breakouts etc.**

1. The Information Team is to compile the safety confirmation information of faculty, faculty staff, students, families, and visitors into a list.
   See *1 (Compiling Safety Confirmation Information)
2. The IT Team is to confirm the situation of the information system backup and other IT problems.
3. The Facility Team is to confirm the operation status of the emergency generator (malfunctions, remaining fuel levels, possible operating time).
4. The Facility Team is to cooperate with the Research Support Division and the heads of each research unit to examine buildings and equipment on campus and the land for damage, and to confirm whether or not there are any fires, gas leaks, or water
Examinations must be conducted by more than one person and if they find any leaks, they are to immediately contact the Emergency Response Team. See *2 (Research Support Division) *3 (Ensuring the Safety of Hazardous Materials in the Event of a Disaster)

5. OIST Seaside House and OIST Marine Science Station personnel are to cooperate with the Facility Team with damage inspections after tsunami warnings have been cancelled.

6. If the damage to the facilities is judged to be serious and dangerous, the OIST Seaside House and OIST Marine Science Station personnel will conduct restoration activities using a meeting room, such as A719 Lab3, as a base of operations.

7. The Health and Safety Team is to check and respond to abnormalities in hazardous materials (including chemical substances, radioactive isotopes, recombination DNA, etc.), high pressure gas, etc., in the laboratory.

8. In the event a fire breaks out, the Emergency Response Team will tackle the fire in its initial stages. Should faculty, faculty staff, students or others be trapped inside elevators, the Facility Team is to rescue them in cooperation with the elevator managing firm.

9. Should any casualties emerge, the Rescue Team is to engage in rescue and first-aid activities.

10. Supervisory Department will act as a point of contact for news reporters and will provide the press with facts such as the safety confirmation situation and the damage situation.

11. Supervisory Department will, at any time, report the accumulated information regarding the damage situation to EMHs.

*1 (Compiling Safety Confirmation Information)
- For compiling the information, use safety confirmation list.
- Safety confirmation information is to be affixed to EMHs whiteboard, so they can check it at any time.

*2 (The Research Support Division)
- The Research Support Division refers to the Animal Resources Section, the DNA Sequencing Section, the Imaging Section, the Instrument Analysis Section, the Mechanical Engineering and Microfabrication Support Section, the Okinawa Marine Science Support Section, the Scientific Computing and Data Analysis Section.

*3 (Ensuring the Safety of Hazardous Materials in the Event of a Disaster)
- The Research Support Division and heads of research units managing radioactive substances,
pathogenic microorganisms or experimental animals should design necessary measures to, in the event of a disaster, stop using these things to ensure their safety or transfer them to a safe place, so that when a disaster occurs they are able to implement these measures without fail.

**Consideration of Temporary Closure of Classes**
1. EMHs will consider temporary closure of classes based on damage information.
2. Should the decision be made for temporary closure, the Information Team will notify the OIST community via email or the website.

**Establishing Hazardous Areas and Safety Zones**
1. After confirming the damage situation, the Facility Team is to clarify hazardous areas on campus using charts.
2. The inspection of hazardous areas mentioned above is to get a grasp of the picture of the total damage. Building inspections are to be conducted using the “Check Sheet for Safety Inspections” issued by the Cabinet Office. (“Guidelines on Emergency Inspections by Facility Administrators Immediately following Large-Scale Earthquakes, Cabinet Office, 2015; The Recovery and Reconstruction Handbook, Cabinet Office, 2016)
   See *1 (Inspection of Building Damage) *2 (Emergency Risk Assessment of Disaster Affected Buildings) *3 (Access to Hazardous Areas)
3. The Facility Team is to conduct a detailed inspection of the damage situation of areas planned for the shelter for affected residents, the accommodation facilities for stranded people (faculty, faculty staff and students), and the accommodation facilities for affected faculty, faculty staff, students and families. They are to inspect the building and confirm that it is able to withstand aftershocks and that there is no risk of the roof collapsing.
   See *4 (Affected residents)

*1 (Inspection of Building Damage)
・ The emergency survey of building damage following a disaster will be conducted by the Facility Team, but the more detailed inspection of building damage will be carried out by municipalities. The municipality will report the results to the Okinawan Government Office and the competent authority.
・ For municipalities, should an emergency building risk assessment be deemed difficult to carry out, there is a system in place to have an inspection team dispatched if a request is made to MEXT.
The Facility Team’s staff in charge of building inspection should keep copies of the building record drawings, structural calculation sheets, revised construction drawings, etc., during times of peace to clarify the areas in every building that should be surveyed in a disaster. (Refer to the “Guidelines on Emergency Inspections by Facility Administrators Immediately following Large-Scale Earthquakes” for the most structurally weak areas, conducting safety assessments for points of inspection (such as structural columns), the order of inspection when conducting safety confirmation assessments, and so on.)

*2 (Emergency Risk Assessment of Disaster Affected Buildings)
- Assessments are to be conducted by certified emergency risk assessors.
- In case where the building has a built-in risk assessment system, the assessment of the assessor is to take precedence.

*3 (Entry to hazardous areas)
- Faculty, faculty staff and students are prohibited from entering hazardous areas. In the event they must enter due to unavoidable reasons, they shall require a hazardous zone entrance permit from EMHs.
- Clearly identify hazardous areas by attaching a sign to the structure or by putting up a rope indicating the no-entry area.
  Tarpaulins will be used as emergency countermeasures against rain to prevent landslides.

*4 (Affected residents)
- Affected residents mean Tancha residents, etc. who evacuated to the OIST in this BCP

**Designation of the Shelter for Affected Residents, Accommodation Facilities for the Stranded, and Accommodation Facilities for Affected Faculty, Faculty staff, Students, and Families.**
1. The shelter for affected residents is to be set up at meeting rooms and auditorium of Conference Center.
2. The accommodation facilities for the stranded are to be set up at near their workplaces.
3. The accommodation facilities for faculty, faculty staff, students, and families are to be set up at President house, seminar rooms of Level C, a lecture room of Level B, etc., Central Building.
4. Those facilities are subject to change after the detailed inspections by Facility Team.

**Support for Affected Faculty, Faculty staff, Students and Families**
1. The Victim Support Team is to set up a support counter for affected faculty, faculty staff and students at near the seminar room C209 of Level C, Central Building.
2. The Victim Support Team will provide emergency food rations and blankets for faculty, faculty staff, students, and families.

3. EMHs will consider economic support depending on the disaster situation of the affected faculty, faculty staff and students.
See *1 (Support for Affected Faculty, Faculty staff and Students)

*1 (Support for Affected Faculty, Faculty staff and Students)
· Support for faculty, faculty staff and students will be considered, such as the postponement of tuition fees, exemption of tuition fees, the establishment of the school’s own scholarship program, and provision of lodgings for students and faculty.

Taking in Affected Residents
1. The Victim Support Team is to begin taking in affected residents in cooperation with administration after the safety of the shelter has been confirmed.
See *1 (Taking in Affected Residents)

2. The Victim Support Team will guide the affected residents to the meeting rooms of Conference Center and create a register of the names of the affected residents (the victim registry).

3. If OIST and the municipality specify terms for accepting affected residents, the reception counter is to clearly specify these terms to the affected residents. If the affected residents do not accept these terms, they are to be refused entry.

4. The Victim Support Team, in cooperation with Onna-son town office, is to provide emergency food rations and blankets for the affected residents.
See *2 (Distribution of Emergency Food, Drink, Etc.)

5. The Victim Support Team will establish a victim consultation counter.
See *3 (Victim Consultation Counter)

6. As a large number of affected residents will be evacuating to our location, the Emergency Response Team will conduct patrols of the shelter for affected residents for the immediate future.

7. Discussions should be held with the affected victims regarding the management of the shelter by the affected residents to allow for independent management as soon as possible. In addition, volunteer run patrols of the shelter should be encouraged within 2 to 3 days of the disaster.

*1 (Taking in Affected Residents)
· Victims accompanied by pets are to be instructed to take care of their pets outside.
Emergency medical supplies, including AED, are to be prepared for the shelter.

- Install TV’s, radios, and PC’s able to connect to the Internet inside the shelter to provide affected residents with disaster status information, recovery information, etc.

- Ensure crime prevention systems are in place, such as setting up female changing rooms and nursing stations, and putting locks on female showers, bathrooms and portable toilets.

- During the time residents are staying at the shelter, if an affected resident is found causing trouble, or there is a report of one, explain the agreement they made with the municipality and convince them to refrain from causing trouble.

- For more details, refer to the “Evacuation Center Management Guidelines (Cabinet Office, 2016)”

- The Victim Support Team is to refer to the Evacuation Center Management Guidelines, etc. and prepare in advance procedures for taking in affected residents.

*2 (Distribution of Emergency Food, Drink, Etc.)

- Each affected resident and stranded person is to be distributed 3 meals per person. Meals for Tancha residents are provided by Onna-son town office.

- During past earthquake disasters, there were many cases of people living off emergency food stores on the first day, and off relief food sent from around the country and handouts of soup-run from local residents on the second.

*3 (Victim Consultation Counter)

- Initially, questions concerning emergency food supplies and bedding are to be expected, but as time goes on, a wide range of questions can be considered, such as the rebuilding of homes and disaster victim certificates. The person in charge of the affected residents should provide information on the municipal office handing these affairs and cooperate in the initial stages of the recovery of the affected residents.

Cooperation with the Administration (Local Disaster Management Headquarters)

1. Supervisory Department is to contact the administration (the evacuation center support manager) as necessary with information such as the number of accepted affected residents.

   See *1 (Administration's (Government’s) Initial Response)

2. Supervisory Department is to contact the administration (the school resumption support manager) as necessary with the OIST damage situation.

3. In consultation with EMHS, Supervisory Department is to promptly and proactively make requests for aid to the administration (procurement and delivery of supplies support) for emergency food and supplies when there are shortages in the OIST food reserves.
4. In consideration of the fact that emergency supplies will be airlifted, a parking lot near village center (Tsunami evacuation area) is to be designated heliport. The Victim Support Team is to designate a storage location for relief supplies. See *2 (Procurement of Supplies)

5. In the event of casualties, Supervisory Department, in consultation with EMHs, is to request the dispatch of a doctor and is to designate a place near the heliport as the triage site. See *3 (Triage)

6. The Rescue Team is to cooperate with the activities of police and dispatched doctors. See *4 (Dealing with the Deceased)

*1 (Administration's (Government's) Initial Response)
- Immediately following the Kumamoto Earthquake, the government established the Disaster Management Headquarters (Tokyo) based on the Disaster Countermeasures Basic Act and made comprehensive adjustments to understanding the damage situation and emergency countermeasures.
- On the following day of the earthquake, the Local Disaster Management Headquarters (Local Disaster HQ) headed by the senior vice minister of the Cabinet Office was established in the Kumamoto Prefectural Office and the following 7 teams were organized by function.
  ① Local Countermeasures Planning and Regulatory Committee ② Supply Procurement and Delivery Support ③ Municipality/Evacuation Center Support ④ Health and Environmental Sanitation Support ⑤ School Resumption Support ⑥ Economic and Industrial Support/Small and Medium Sized Enterprises Support ⑦ Rubble and Disaster Waste Management
- 3 days after the earthquake hit, the disaster victim life support team was established and personnel from every ministry and government office were dispatched as support staff to municipalities in the disaster area.

*2 (Procurement of Supplies)
- The heliport will be established at Tsunami evacuation area and the substitute heliport will be decided by Facility Team.
- The Victim Team’s supply managers will work on a rotating shift system so that there is 24 access to the relief supplies.
- Prepare and request food supplies for the elderly and infants.

*3 (Triage)
- Triage is the prioritization according to the degree of urgency and extent of injury or illness in order to carry out appropriate transportation, treatment, etc., in the event there are large numbers of injured or sick people such as when a disaster occurs.
*4 (Dealing with the Deceased)

- The Rescue Team is to prepare in advance a layout plan (such as of areas for people who have been classified by triage to stay) in the event triage is to be implemented.
- The morgue is to be located at a place kept cold, decided by Facility Team.
- Only authorized personnel are to enter the morgue. The press are to be refused entry.
- The police will conduct autopsies and body identification investigations on unidentified bodies. Furthermore, requests for support from the Japanese Society of Legal Medicine and alterations to issuances of postmortem certificates can be made.
- The Rescue Team, in cooperation with the Information Team, is to make preparations in advance to preserve remains and prepare paperwork (for repatriation to their home country) for cases when the deceased is not from Japan.

Phase 3

Action Taken 2 to 3 Days After the Disaster

Conducting detailed damage inspections of buildings, equipment, etc., and beginning preparations to resume business operations while implementing support activities for the recovery of affected residents, faculty, faculty staff, students, and families.

Preparations to Resume Business Operations

1. The Facility Team will assess the damage of buildings and determine whether each laboratory, meeting room, etc. can be recovered (repaired) and used or, should recovery be difficult, if a replacement is necessary. See *1 (Damage to Buildings)

2. The Health and Safety Team, in cooperation with the head of the research unit, is to inspect the damage situation of research equipment (including machinery and tools), abnormalities in hazardous materials (including chemical substances, radioactive isotopes, recombination DNA, etc.), high pressure gas, etc., and submit the results to the Supervisory Department.

3. The Facility Team, the Health and Safety Team, and the heads of each research unit are to cooperate and confirm which laboratories (including the equipment), meeting rooms, etc. are available, and to make modifications to the laboratories, meeting rooms, etc. necessary to resume classes and research. The Supervisory Department is to report the information to EMHs.

4. The Supervisory Department, in cooperation with the Facility Team, is to keep the
administration (the rubble and disaster waste disposal team) up to date with the building and land damage situation, and the (approximate) amount of rubble, disaster waste, and pollutants.

5. The Facility Team is to prepare for the restoration of the power, water, and gas infrastructure systems while taking into account that in past great disasters many electrical fires were caused due to the restoration of infrastructure. They are then to assess the condition of power sources and confirm that the source of the gas is switched off in each room.

6. EMHs will determine the schedule for resuming business operations (with the goal of resuming classes and research within 3 weeks after the disaster) based on the damage situation and recovery outlook.

See *2 (Dates and Locations of Venues for Entrance Examinations, Entrance Ceremonies, and Graduation Ceremonies)

7. Once the schedule for resuming business operations has been determined, the Information Team will notify persons concerned (faculty, faculty staff, students, etc.) of changes to the resumption dates of class, research, and events.

*1 (Damage to Buildings)

- Campus damage assessments are to be conducted in accordance with the government directive “damage assessment standard.” A request for the dispatch of specialists should also be made in cooperation with the administration.

*2 (Dates and Locations of Venues for Entrance Examinations, Entrance Ceremonies, and Graduation Ceremonies)

- If it is difficult to hold entrance exams, entrance ceremonies, or graduation ceremonies at OIST due to the occurrence of an earthquake, consideration to make cooperation agreements with other universities to use their halls for the ceremonies will be given.

**Support Activities for Affected Residents, etc.**

1. The Rescue Team is to establish a first-aid station and a mobile clinic reception area in the shelter for affected residents.

2. The Rescue Team (health center) is to assess the mental and physical condition of faculty, faculty staff and students for things like PTSD while endeavoring to maintain mental and physical wellbeing.

3. The Victim Support Team will begin to accept volunteers (including OIST students) and clarify their roles while taking the expertise of each volunteer into account.

See *1 (Accepting Volunteers)
4. The needs of victims will gradually shift from those for things such as water and food immediately following the disaster, to things such as the living environment in the shelter for affected residents and various kinds of applications, including those for housing and disaster victim certificates. Therefore, preparations for food, supplies, and information provision systems are to be made to respond to these needs. See *2 (Health and Sanitation Management of Affected Residents) *3 (Assisting Persons with Special Requirements During Disasters)

5. Keep in close contact with the administration (supply procurement and delivery support) to respond to requests for emergency provisions and supply procurement as they will continue for 2 to 3 days following the disaster. The Victim Support Team will receive and manage the relief supplies. Volunteers should be utilized after the taking on of volunteers has begun.

6. The Information Team is to establish a platform for domestic and international donations to be made.

7. The Information Team, in cooperation with the bereaved families and administration (including foreign embassies in Japan), is to complete the paperwork for the repatriation of remains to their home countries.

8. If stranded people wish to return to their homes, Supervisory Department and Information Team are to send them home after confirming that the journey to their homes is safe by obtaining information regarding the damage of the road etc., via the TV/radio. If the school bus is operational, people should be transported by bus.

9. EMHs is to decide whether or not to make request for patrols and/or the dispatch of medical/health/welfare specialists to the administration (health and hygienic environment support), to see to the regular conduction of health checks and the health management of affected residents. The Supervisory Department is to make the aforementioned requests to the administration.

*1 (Accepting Volunteers)
- At the acceptance stage, volunteers are to be classified by their expertise to ensure effective support activity.
- Encourage that all volunteers fill in all the necessary items in the volunteer directory.
- The volunteer activity period is to be limited to 1 month following the disaster.

*2 (Health and Sanitation Management of Affected Residents)
- Health management of affected residents will be conducted in cooperation with the administration, volunteers, and NPO organizations as it is expected that many people will be subject to health management. The administration will dispatch medical teams and public health
nurse teams to disaster-struck areas.

- In the event there are safety issues for the elderly due to the lack of things such as handrails in the temporary showers/bathrooms, arrange for the use of nearby bathing facilities in retirement homes, hotels, and inns. In such cases, secure means of transportation to the facilities.
- If temporary toilets are installed, hygiene management should be independently handled by victims and volunteers while being promoted in cooperation with local cleaning organizations and the administration.
- The Victim Support Team is to cooperate with the Rescue Team (health center) to prepare countermeasures against infectious diseases (influenza, norovirus, etc.) and food poisoning.
- In the event of a disaster in summer, air conditioning equipment, including temporary air conditioning equipment, is to be prepared for the shelter for affected residents as fighting the heat will become an issue.
- For hygiene management, it is effective to clean the entire shelter for affected residents on a regular basis. When this happens, it will be necessary to have the affected residents move from the shelter for a short period of time. During past disasters, it was possible to utilize the like of hotel ships implemented by the Self-Defence Force.

*3 (Assisting Persons with Special Requirements During Disasters)

- Elderly people, chronically ill people, people with intractable diseases, pregnant women, and infants are to be allocated to the appropriate areas, such as welfare evacuation shelters (welfare facilities for the elderly, hospitals, etc.) in cooperation with the administration.
- For affected foreigners, work in cooperation with the consulate, etc.
- Urge consultation to the “Disability Support Center” for people with visual and hearing impairments.

### Phase 4

**Action Taken 4 to 7 Days After the Disaster**

In addition to carrying out operations determined on the business operation resumption schedule, management/operations of the affected resident shelter will be transferred to the affected residents for independent management.

1. Begin repair work or substitution operations on laboratories, meeting rooms, offices, etc. affected by the disaster.
2. The Facility Team and the Health and Safety Team are to cooperate with Financial Management Division (Budget Section) to apply for the restoration budget of
facilities and equipment.
See *1 (Restoration of Facilities and Equipment)

3. Supervisory Department is to cooperate with administration on the dismantling of affected buildings, disposal of rubble, and pollutants.
See *2 (Dismantlement of Affected Buildings and Rubble Disposal) *3(Disposal of Disaster Waste)

4. Total management/operation of the shelter for affected residents is to be transferred from the Victim Support Team to the affected residents.
See *4 (Independent Management of the Shelter for Affected Residents)

*1 (Restoration of Facilities and Equipment)
・ It will take time to repair and purchase advanced research equipment. Prepare contact addresses for the purchase and repair of important equipment in advance in peace time.

*2 (Dismantlement of Affected Buildings and Rubble Disposal)
・ Cooperate with administration and contractors and take measures against the dust and asbestos that accompany dismantlement (instruct contractors on dismantlement and distribute masks to victims).

*3 (Disposal of Disaster Waste)
・ Separate burnable and unburnable waste and put it in the designated areas.

*4 (Independent Management of the Shelter for Affected Residents)
・ From the second day onwards, operation/management of the shelter for affected residents is to be gradually transferred to the affected residents for independent management.
・ Utilize volunteers and distribute rations/meals and transport/sort supplies. (Switch over to foods that won’t lead to an unbalance in nutrients.)

Phase 5

Action Taken Within 1 Month of the Disaster

Resume educational and research activities within 3 weeks, and close the shelter for affected residents within 1 month.

1. Utilizing available resources, educational and research activities are to be resumed within 3 weeks.
See *1 (Resumption of Business Operations)

2. Supervisory Department is to cooperate with the administration concerning
temporary residence of the disaster victims.

3. Close the shelter for affected residents within 1 month, depending on the status of the restoration of essential utilities.
   See *2 (Closure of the Shelter for Affected Residents)

4. The dissolution of EMHs will be decided by the President while taking into account recovery, etc.

*1 (Resumption of Business Operations)
   · In the event that resuming business operations in OIST within 1 month proves difficult, cooperation with other universities to tentatively conduct research activities etc., at other universities will be considered. Details are to be considered with other universities in advance in peace time.

*2 (Closure of the Shelter for Affected Residents)
   · The restoration of essential utilities and the reduction of the number of evacuees are related. In the Great Hanshin-Awaji Earthquake, the number of evacuees gradually decreased with the restoration of essential utilities. People began to leave to begin working after around 2 weeks after the disaster.
Execution of the BCP and Earthquake Drills (Do)

When an earthquake hits, act in accordance with the BCP for Earthquakes. Education and training are to be conducted so that when an earthquake hits, all faculty stuff, students, and families are able to execute the core of the BCP for Earthquakes.

1. After joining OIST, faculty stuff, students, families, external contractors and businesses (including security guards, cleaners, nursery schools, restaurants, and shops) will go through an orientation or will regularly receive explanations regarding earthquakes and tsunamis that occur in Japan, techniques to ensure safety in the event of earthquakes and tsunamis, and an outline of the BCP for Earthquakes.

2. EMHs, Supervisory Department, and every team will receive education and training on the following items described in the BCP for Earthquakes on a regular basis.
   - Earthquake Management Headquarter Establishment training (applies to: EMHs, Supervisory Department, and all teams)
   - Training for cooperation with Administration
     ① Training for establishing EMHs via telephone and training for telecommunications with administration (applies to: EMHs and Supervisory Department)
     ② Establishment and Management training for the shelter for affected residents in tandem with the evacuation training of Tancha residents to the OIST evacuation shelter (applies to: Supervisory Department, Rescue Team and Victim Support Team)
     ③ Triage support training for the Rescue Team and the administration-dispatched medical team (applies to: Supervisory Department and Rescue Team)
   - Identifying the closest tsunami evacuation area or building to one’s home and evacuation training (applies to: The OIST community)
   - Fire response training (applies to: Emergency Response Team, Facility Team)
   - Post-disaster building inspection training (applies to: Facility Team)
   - Safety confirmation training (applies to: Information Team, all faculty, faculty stuff, students, and families)
   - Emergency priority operations procedure confirmation training (applies to: All team members)
   - IT data backup training (applies to: IT Team)
   - Tsunami attack training (applies to: Users and staff of OIST Seaside House and
OIST Marine Science Station)

- Training for the establishment procedure of substitute laboratories assuming that one of the research buildings are damaged and are unavailable for immediate use (applies to: EMHs, Supervisory Department, Facility Team, Research Support Division, Budget Section, and Health and Safety Team)

3. Comprehensive training of the BCP (comprehensive training means training combining EMHs establishment training and the other above-mentioned trainings listed under 2) will conduct once a year.

4. Supervisory Department and every team will participate in seminars on disaster prevention implemented by the administration and strive to improve their scientific knowledge and skills.

5. All OIST personnel, students, and families are to study disaster prevention measures from time to time on the OIST website (e-learning) and raise awareness of disaster prevention.

6. There is to be 3 days’ worth of emergency food reserves for faculty, faculty staff, students, and families. Every year, confirm the amount, expiry dates, etc. See *1 (Confirmation of Emergency Reserves)

7. Test runs for the emergency generator are to be conducted periodically.

8. The Research Support Division and every research unit are to coordinate with the Health and Safety Section for “preparation for disasters” (MEXT Disaster Management Operational Plan, Ministry of Education Culture, Sports, Science and Technology, 2016) See *2 (Preparation for Disasters)

*1 Confirmation of Emergency Reserves

<table>
<thead>
<tr>
<th>Emergency Reserve Items</th>
<th>Completed</th>
<th>To be completed</th>
<th>Notes</th>
<th>Date of Confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food/Drink Reserves</strong></td>
<td></td>
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<td></td>
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<tr>
<td><strong>Food</strong></td>
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<td></td>
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<tr>
<td>MRE (Bread, Rice, Porridge, etc.)</td>
<td>□</td>
<td>□</td>
<td></td>
<td>yy.mm</td>
</tr>
<tr>
<td>Instant rice x 3 per OIST community</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Drink</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Stored Drinking Water</td>
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<td>□</td>
<td></td>
<td>yy.mm</td>
</tr>
<tr>
<td>(Approx. 3 Liters per day per person x no. of OIST community)</td>
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<td></td>
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First-aid supplies/Daily Necessities

<table>
<thead>
<tr>
<th>Category</th>
<th>Items</th>
<th>Qty</th>
<th>Qty</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Supplies</td>
<td>Disinfectant, Digestive Medicine, Cold Medicine, etc.</td>
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<tr>
<td>First-aid Supplies</td>
<td>Wet Wipes, Adhesive Bandages, Gauze, Rubber Gloves, Safety Goggles, etc.</td>
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<td>yy.mm</td>
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<tr>
<td>Disaster Management</td>
<td>Torch, Portable Radio, Spare Batteries, etc.</td>
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<td>☐</td>
<td>yy.mm</td>
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<tr>
<td>Daily Necessities</td>
<td>Towels, Blankets, Portable Gas Stove, Disposable Chopsticks, knives, forks, Plastic Bags, Portaloo, etc.</td>
<td>☐</td>
<td>☐</td>
<td>yy.mm</td>
</tr>
</tbody>
</table>

*2 (Preparation for Disasters) (MEXT Disaster Management Operational Plan, Ministry of Education Culture, Sports, Science and Technology, 2016)

1. Safety Measures for Facility/Equipment
   - Appropriate precautionary measures should be taken, such as the securing of TV’s, PC’s, office equipment, library bookcases, and medical equipment, as well as thorough management of hazardous materials, such as drugs and equipment for conducting experiments in order to protect against injury caused by falls and breakages of facility/equipment in the event of earthquakes and other disasters.

2. Disease Control through Sanitation and Cleanliness and other Health and Safety Measures.
   - Take disease prevention measures, such as cleaning the interior and exterior of buildings, purifying drinking water and other such prevention measures, as well as the securing of the necessary drugs and equipment to conduct those measures, while bearing in mind the health and safety of children and students, faculty and university hospital patients in the event of a disaster.

   - Regarding the safe management of electricity, gas (including high pressure gas), dangerous chemicals, alcohol, petroleum, and other hazardous materials at the school, take appropriate precautionary measures such as establishing a plan in advance to stop using such goods or the move them to a safe location when a disaster occur.
Universities and others that manage radioactive materials, pathogenic microbes, and experiment animals are to take appropriate precautionary measures to prevent disasters inherent in the use of these materials in accordance with applicable laws and regulations.
Review of the BCP for Earthquakes (Check)

When an earthquake hits or after holding a drill for the BCP for Earthquakes, actions to be taken within a month after the earthquake, which are mentioned in the BCP, shall be investigated and analyzed, to find items to be improved. Additionally, internal auditing, a walk-through and other measures shall be regularly conducted regardless of whether an earthquake hits in order to reveal a gap between the BCP and the present situation surrounding disaster prevention at OIST.

1. Chief of EMHs shall set up an Investigation Committee for Earthquake Disaster Countermeasures within 6 months after the occurrence of a disaster, investigate and analyze the actions taken within a month after the earthquake, and clarify which parts of the BCP should be improved. The Committee shall then submit an investigation report to the Chief within 6 months after the start of the investigation.

2. Emergency Response Coordinator shall present defects discovered from the drills which are held regularly at the Risk Management Conference (held 2 times a year) and discuss the items to be improved there.

3. Those who conducted the measures including Management Review, internal auditing, walk-through, etc. shall correct the present situation found far from the BCP (non-compliance with the BCP) instantly when it can be dealt with immediately. When it requires more time, they shall discuss further and take corrective measures at the Safety and Health Committee meeting which is held every month.

   See *1: (Management Review)
   See *2: (Internal Auditing)
   See *3: (Walk-through)

4. The Facility Team shall accumulate data on the strength of the buildings on campus including the Center Building, research buildings, etc. when an earthquake of seismic intensity under 6 Lower (3 to 5) hits and prepare for the utilization of the data for building investigation when the BCP is implemented.

5. The BCP shall be revised when useful lessons for earthquake measures are gained from investigations and analyses of earthquake measures conducted outside of the OIST campus, after the Risk Management Conference approves the revision.

*1 (Management Review)

- Management Review is practiced once a year. OIST authorities go around the campus with Emergency Response Coordinator and point out issues related to disaster prevention and safety.
The result will be presented at the Safety and Health Committee meeting held after the Review and publicized on the Safety and Health Committee website.

*2 (Internal Auditing)
- Internal auditing is conducted once a year. Audit items include check of documents related to earthquake measures of which each team takes charge and the implementation of the one of the educational trainings.
- The result will be presented at the Safety and Health Committee meeting held after the internal auditing and publicized on the Safety and Health Committee website.

*3 (Walk-through)
- Walk-through is conducted periodically. The Walk-through Team consists of Emergency Response Coordinator and Safety and Health Committee (representatives from the Facility Team and representatives from the Health and Safety Team).
- Target areas are divided into the Center Building, research buildings, Okinawa Marine Science Station, and residential area, one of which undergoes a walk-through in a different week. Inspection shall be done on how well “Disaster Preparation” (Disaster Management Operational Plan by the Ministry of Education, Culture, Sports, Science and Technology) has been followed in Center Building, research buildings, and residential area. Inspection in the residential area shall be limited to public facilities, such as nursery schools and shops.
- “Disaster Preparation” contains the securing of evacuation routes, the prevention of fall of the ceiling of buildings, the prevention of fall of equipment, furniture, etc. at a high location.
- The result will be presented at the Safety and Health Committee meeting held after the walk-through and publicized on the Safety and Health Committee website.
Measures and Improvement (Act)

Problems discovered through the reviewing process of the BCP shall be improved in the order of priority for risk reduction, and the BCP shall be revised accordingly. The effective and constantly updated BCP shall be operated.

1. Measures shall be taken to tackle the underlying causes of defects discovered in the analysis by the Investigation Committee for Earthquake Disaster Countermeasures gathered after the occurrence of the earthquake, in the order of priority for risk reduction.
   See *1: (Priority for Risk Reduction)

2. Discussions shall be conducted sufficiently to avoid new risks when taking the measures mentioned above.

3. Adopted measures shall be reflected in the BCP.

4. Defects (items to be improved) in the present BCP revealed from the drills shall be dealt with in the way mentioned in the second and third clauses when a revision is needed to the BCP after the Risk Management Conference approves the revision.

5. A gap between the BCP and the present situation observed through the Management Review, internal and external auditing and walk-through shall be corrected.

6. Improvement and corrective measures shall be informed to all faculty, faculty staff, students, their family members and external workers (security staff, cleaning staff, restaurant staff, etc.).

*1 (Priority for Risk Reduction)

The priority order for risk reduction specified by ISO/IEC GUIDE 51 (Safety aspects-Guidelines for their inclusion in standards) is as follows. The first priority is “inherently safe design,” where risks are substantially reduced by removal or replacement of risks with alternatives. The second priority is the use of “protective devices,” such as fences that can prevent workers from being caught in a conveyor belt. The third priority is to display “information for safety” including an indication of safe usage of machines to users. These three points are adopted as priority in the process of designing, however, risks cannot be completely removed even after these steps are taken. In order to reduce risks further, machine users shall take measures, including the organization of procedures for safety, education and training, the use of personal protective equipment and the installation of additional protective devices, such as an alarm system for the time of emergency. There is no priority order for such measures, however, according to the field of accident investigations, the use of personal protective equipment is placed as a final safety measure that shall be taken after all the others.