

# Conclusion

## The Future of Disaster Research

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In this book, we introduced the development of disaster research, the need for which the Great East Japan Earthquake has heightened awareness, in a wide range of fields mainly by Tohoku University faculty. Ten years have passed since the earthquake, and while it is of course necessary to continue researching reconstruction, many fields of disaster research have reached a turning point where we need to think carefully about what to research for the present affected areas and people. For example, a key point is to remember and utilize the lessons learned from the disaster. I hope that every research field will develop principles from now on with broad perspectives.

When we consider the purpose of disaster research, which is to mitigate future disaster damage, we need to consider that the existing knowledge of earthquakes has become outdated in many ways. A typical example is communication, where the situation is quite different today. Cell phones have become *smartphones*, use of Wi-Fi has spread, and online conference apps and social media are part of our daily lives. The government disaster management systems and private sector preparedness have also changed to a certain extent. Therefore, it is necessary to study the experience of the Great East Japan Earthquake while conducting research on more recent disasters. In other words, disaster research from now requires us to constantly update our knowledge.

In addition, based on the experience of studies on earthquakes, we have realized that the development of disaster research needs to be more interdisciplinary, because the approaches required for disaster correspondence are multifaceted and connected to each other in general. Recently, the COVID-19 pandemic has highlighted the importance of medical collaboration in disaster responses. The International Research Institute of Disaster Science (IRIDeS) aims to conduct interdisciplinary research by integrating science & engineering, medicine, and the humanities. I, too, have experienced that we can raise interest for disaster research in our study session on disaster management of companies by combining research of the engineering field with a historical perspective, and considering human safety and health. Therefore, we should deepen the research in our own fields, while making more of opportunities to be exposed to research from other fields.

Lastly, within disaster research, we would like to achieve both the attaching of importance to each region and engaging in international collaboration. In terms of individual regions, even a disaster across wide geographical areas is a local disaster, and to understand the characteristics of each region is a basic step. Furthermore, since the number of disaster researchers even in Japan, a disaster-prone country, is small compared to the need for disaster education, every researcher should support each region regardless of their field of expertise. On the international

front, Japan's disaster management is generally considered advanced and there are high expectations for the dissemination of information, but a colleague who is familiar with other countries pointed out that there are aspects of our disaster countermeasures in the state of "Galapagosization." I thought this may be true, for example, in Japanese evacuation centers where evacuees are crowded in gymnasiums. Then, we had have an urgent need to improve this situation because of the COVID-19 pandemic, .

With that being said, young researchers who will lead research in the future may say that my requests above are too much of a burden. However, the requirement is naturally high because this is a field that is directly related to people's life, and therefore demands careful consideration. I hope that young researchers will make the most of interdisciplinary collaboration. A key point is to work together with colleagues whose strengths are our weaknesses. I also believe that the duty for experienced researchers is to make disaster research an attractive field and increase the number of research colleagues.