Chapter 1
Introduction

Abstract This book overviews the poisoning which occurred in the 1950s and 1960s among the residents in Minamata, Japan, who ate seafood contaminated with methylmercury discharged from the chemical factory, Chisso Corporation. This chapter describes the purpose in writing this book and the reason why the author used MPM (methylmercury poisoning in Minamata) as a disease name instead of so-called Minamata disease.

Keywords Chemical factory · Central nerve disease · Chisso · Discrimination · Minamata disease · Motive for writing · Pollution-related disease

1.1 Why Did I Write This Book?

In July 2012, I was employed as a program-specific professor to implement the "Connectivity of Hills, Humans and Oceans Educational Program" which was opened to all graduate students of Kyoto University. In 2010 when I worked at the National Research Institute of Aquaculture, I visited the Minamata Disease Municipal Museum in south Kyushu. There, I learned details and personal accounts of a disease that is commonly called "Minamata disease." This disease is defined as methylmercury poisoning which occurred among people living along Minamata Bay and the Shiranui Sea (Yatsushiro Sea) in southwestern Kyushu (hereafter called "MPM" as an acronym), Japan, who ate local fish and shellfish contaminated with methylmercury discharged from a private company (Minamata Disease Study Group 1966). At that time, I was terribly shocked by the misery caused by the disease that made many residents suffer. I also knew that many doctors and researchers worked hard to care for the patients as well as to clarify the cause of this disease; however, some people involved with this incident hindered rather than helped to resolve this human and ecological tragedy. This experience moved me to add the lecture regarding this disease among seven lectures in my class "Environmental Conservation of Coastal Waters" in the educational program in Kyoto University from 2013. I considered that this incident was an inevitable consequence of Japan's rapid economic growth after World War II and that similar phenomena are a likely consequence of rapid economic development. This class was conducted in English

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in order to ensure ease of information and communication about this unfortunate incident for international students, mainly from developing countries. The class was concluded in January 2017 due to my retirement.

I met Dr. Hajime Nishimura who is an author of a book (Nishimura and Okamoto 2001) to which I had referred to in my lecture to explain the mechanism about how MPM occurred, at an academic meeting which was held on December 18, 2016. We agreed that it is important to ensure that young people all over the world need to have accurate information of this disease, considering that the disease occurred again in Niigata, Japan (Masano 2013), as well as in Ontario, Canada (Takaoka et al. 2014), and in China (Harada 1985). He strongly recommended to me to publish a book about MPM in English. There are many books and papers which describe this disease; however, most of such publications have been written in Japanese (e.g., Ui 1968; Harada 1972, 1985; Miyazawa 1996; Takamine 2016). Therefore, I wrote this book in English in the form of a lecture to notify young people throughout the world about the outline of the disease as well as the reasons why this disease occurred so that this tragedy is not repeated again.

1.2 Use of "Methylmercury Poisoning in Minamata (MPM)" Instead of "Minamata Disease"

At the beginning stage of the MPM outbreak, this disease had been locally called "Minamata strange disease," as the cause of the disease had not been found. A study group of this disease in Kumamoto University tentatively named "Minamata disease" in 1957, because the group considered that "strange" was not acceptable from the viewpoint of the medical term. Thus, the members named their own group as the "Minamata Disease Study Group." The name "Minamata disease" was used first in a paper (Takeuchi et al. 1957) which was published from *Kumamoto Igakkai Zasshi* (*The Journal of the Kumamoto Medical Society*). In 1958, most newspapers and mass media began to use this name.

In December 1969, the Examination Committee for Specification of Pollution-Related Illnesses of the Ministry of Health and Welfare (MHW) denominated this disease as "Minamata disease," and then the Committee reported to MHW in March 1970 as "It is appropriate to adopt 'Minamata disease' officially, because this name has been used widely in the society."

In general, diseases are denominated based on causative agents or on symptoms; however, "Minamata disease" was named based on the geographical or administrative name, resulting in groundless discrimination against residents in the Minamata area. Many people have often associated the name of "Minamata disease" with an endemic, infectious, or hereditary disease peculiar to the Minamata region. Such misunderstandings have led not only to damage to sales of local farm and marine products and to tourism in Minamata but also to discrimination against residents in the Minamata area at the time of marriage and employment. The discrimination

occasionally extended to elementary and junior high school students. For example, when they had a football game or a school trip, they received harsh words like "Don't touch me. Minamata disease will spread to me" from students living in other localities (Harada 1985; Iriguchi 2012).

In 1973, the Minamata city, the Minamata Chamber of Commerce, and the Tourism Association tried to change the name of Minamata disease. They collected signatures from 72% of electors in Minamata city which were sent to the Environment Agency (Minamata City 2007). Their efforts, however, were not acknowledged; therefore, "Minamata disease" is still in use widely in Japan. Considering that "Minamata disease" includes the harmful expression, Iriguchi (2012) recommended to use "methylmercury poisoning," while Ishihara (2014) recommended "methylmercury intoxication." On the other hand, Harada (1985) maintained the effectiveness of "Minamata disease," because he considered that the term included the geographical name which showed specificity that the methylmercury poisoning occurred through the bioaccumulation in the coastal ecosystem first in the world as well as the meaning of a vow to remember this incident.

In this book, "methylmercury poisoning" is used for a general term of the central nerve disease that is caused by the consumption of methylmercury irrespective of the consumption route, that is, direct consumption or consumption through food chains. When this disease occurred in the Minamata area (the area along the coast in Shiranui Sea), the abbreviation "MPM" that stands for "methylmercury poisoning in Minamata" is used. It is necessary to discuss an appropriate term of this disease. I expect a referendum at a local level to be conducted to determine the disease name.

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