



## **Climate and music (Toward promoting the cultural understanding and ESD spreading from the “Doors of Song”)**

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All music works have their own cultural background, and the generation and expression of songs are closely related not only to their languages and customs but also to the regional characteristics of natural environment including the climate and seasonal cycles. For example, there are many songs expressing the people's emotion relating to the “seasonal feeling”. Thus, scientific study of the climate and seasonal cycle there would be also useful for understanding the context of music, as well as the other background. Such approach enables us to sympathize with the feeling of the people and to sing and appreciate the songs, even for the other regions. Inversely, what we feel from the music expression could be helpful to understand the associated climate or weather situation.

On the other hand, education on climate system sciences including the climate variability is important not only for providing the scientific backgrounds for the individual ESD (Education for Sustainable Development) targets, such as studies on environment, disaster prevention and climate variability, but also for promoting the students' and teachers' fundamental “ESD Literacy” itself as thinking of various complex relations, diversity, etc. among the ESD targets. Besides, climate systems and their variations, including their seasonal cycles, show close relationships to the various activities in ESD, such as cultural understanding, and so on. Furthermore, such activities could help to promote the students' or teachers' understanding of the “heterogeneous others”, which is very important in the ESD.

Based on the above concept, our group has continued, for many years, the interdisciplinary integration of the knowledge on climate and music, and has developed the crosscutting study plans on the climate and cultural understanding education, with use of these integrated knowledge. A part of our various results so far have been just summarized in a book titled by “Climate and music (Cultural understanding and ESD spreading from the “Doors of Song”)", although it is written in Japanese (it will be published this spring). This contains mainly the integration of the knowledge on climate and songs including the traditional seasonal events for around Germany, North Europe and Japan, and brief explanation of some examples of the crosscutting study plans on the climate and cultural understanding education, with use of these integrated knowledge. In the EGU2019, we will introduce briefly the main content of this book translating into English.