

## **Kakenhi Supports Research, Education, and International Engagement**

Yukio Himiyama

Emeritus Professor, Hokkaido University of Education



I obtained my doctorate from King's College London in 1980 with a comparative study of "culture spaces" in Japan and Britain. I then secured a position on the faculty of the Asahikawa Campus of Hokkaido University of Education, and pursued a career in research and education there for over 34 years up to March 2015, when I reached the mandatory retirement age. Over my career I was fortunate enough to be principal investigator on eight Kakenhi projects over a total of 18 years. Those projects have had an impact not only on my research but also on education and international engagement.

The main topic of my research was change in land use. Starting with Asahikawa itself, I expanded the scope of this research to encompass Hokkaido, Japan, China, and even Monsoon Asia, and achieved many successes. I started by obtaining two Grants-in-Aid for Encouragement of Young Scientists, which allowed me to pursue research on methods in the use of large-scale land-use maps and topographic maps. Building on the achievements of these projects, I planned and implemented a project on changes in land use (database compilation and spatiotemporal analysis) as part of a Scientific Research on Priority Areas project titled "Geographic Information System for Environmental Change in Modern Japan" (FY1990–1992). One of the major outputs was the Land Use Information System (LUIS), which shows historical changes in land use across Japan. Most of the data used in this system was generated from several thousand old topographic maps digitized by me together with students of Hokkaido University of Education and collaborators outside the university. The system was renewed with the support of the National Institute for Environmental Studies and made available to the public as LUIS Web via the Institute's website from December 2015. Everyone is welcome to use it, and it pleases me greatly to see that a product of the research I did 25 years ago has, at least in part, found a new use today.

Once things had settled down after the abovementioned priority area research project, I

started researching land use in China, which has a great impact on global food balance and sustainability. I began with some preliminary research, and used its outcomes as the basis for an application under the newly launched category of Grant-in-Aid for Scientific Research (S), titled “China-Japan Comparative Study of Land Use/Cover Change” (FY2001–2005). The application was successful, allowing me to advance this research to its full extent, and to apply the outcomes thereof to another Grant-in-Aid for Scientific Research (S) project titled “Towards Sustainable Land Use in Asia” (FY2009–2013). This last Kakenhi project was implemented as a pilot study for a large-scale research project I had been planning from earlier on. Its final output is a publication to be released by Springer in the fall of 2017, some three and a half years after the project’s conclusion. I am hoping that it will provide an incentive for the pursuit of large-scale research on the development of sustainable practices of land use in Asia.

I was thus fortunate to receive a relatively large amount of Kakenhi grants for a researcher at a university of education. These grants invigorated research activity in a way that also contributed to improvements in teaching content and educational environments at my university. In particular, students pursuing undergraduate and master’s thesis research on related topics became partners in my Kakenhi project, and their research environment benefited from the generous provision of not only dedicated computer facilities but also maps and other materials. Many of the research outputs from the projects were also published as co-authored papers with students. Field research was a major part of my two Grants-in-Aid for Scientific Research (S), and I took care to enable students to conduct surveys in the areas that they had selected for their undergraduate or master’s thesis research, both within and beyond Japan. Students were also included whenever possible in domestic and international joint surveys conducted in partnership with co-investigators and collaborators, in the expectation that there would be educational benefits for the students beyond the assistance they provided to the research itself. Partly because we were based at a university of education, it was easy to assess these educational benefits even while the students were still enrolled, simply by looking at the content and quality of their teaching practice classes, teaching practice at schools, research presentations, reports, and the like.

Since August 2016 I have been President of the International Geographical Union (IGU). I am the first person from Japan and only the second from Asia to be elected to this position—something which would not have been possible without Kakenhi. In

August 1991 in Asahikawa, I coordinated the International Symposium on Environmental Change and Geographic Information Systems as part of the Scientific Research on Priority Areas project “Geographic Information System for Environmental Change in Modern Japan.” The symposium attracted around 200 participants from within Japan and 100 from overseas, and a memorial postage stamp was even issued. The connections I made with other researchers at that symposium enabled me to establish the IGU Commission on Land Use/Cover Change (IGU-LUCC) within the IGU in 1996. For almost the whole period that I headed this Commission, from 1996 to 2004, I held Grants-in-Aid for Scientific Research (B) or (S), allowing me to pursue my activities to the full both in research and in leadership of the Commission. This work was recognized in my election as Vice President of IGU in 2010. My term of office as Vice President from 2010 to 2016 fortunately overlapped largely with my second Grant-in-Aid for Scientific Research (S), providing a great support for both my research work and the performance of my vice presidential duties. My election as IGU President would have been unthinkable without such support.

As explained above, I have benefited greatly from the Kakenhi system, but this does not mean I believe it to be free of problems. Firstly, while the selection mechanisms are rigorous and fair, they continue to prove extremely challenging for innovative research, truly interdisciplinary research, and research that lacks a strong foundation in academic circles. For example, is there scope within the current Kakenhi system to embrace genuinely interdisciplinary and transdisciplinary research in line with the Future Earth international research platform for global sustainability? Secondly, the system closes off possibilities for older researchers to continue their work. It is extremely difficult for researchers to win Kakenhi or other research grants after resigning from their regular positions at the mandatory retirement age. There are some universities that have taken steps to enable researchers to secure research funding after mandatory retirement, but they are still limited in number. Valuable human resources, cultivated using large amounts of tax money, are going to be wasted: surely this is a loss to the nation as a whole. Since my own retirement from university, I have had to continue my research and duties as president of an international scholarly association with hardly any compensation. The irrationality of this arrangement in this country often crosses my mind these days.