Implementation and Effectiveness Verification of Risk-based Control Approaches for Lead Contaminated Environment and Lead Poisoning in Zambian Mining District



In FY2020, certain results were obtained in all three research topics although the project was hampered by some restrictions due to COVID-19.

In research topic 1, we evaluated the lead tolerance and nitrogen dynamics of soil microbial functions, and analyzed data from online meteorological observations.

In research topic 2, we supported the ZMERIP (World Bank-funded project) to test and treat 10,000 children, and created a database of about 2,000 treatment outcomes. Environmental samples were collected to simulate changes in blood lead levels, and preparations were made for cost-benefit analysis in the socioeconomic field. In research topic 3, we estimated the cost of environmental remediation methods and lead diffusion routes, and compiled proposals for pollution control measures.

For the capacity development, it was not possible to invite people from overseas to Japan because of the COVID-19. However, we expanded the online content as an alternative measure. In addition, Zambian researchers staying in Lusaka and Japanese researcher dispatched from Japan contributed to research promotion and capacity development in Zambia. In addition, an MOU with ZMERIP is expected to be signed in March 2021 for technical cooperation in the areas of health and environmental remediation.

