

Survey by the Heat Group



Photo 1

As the temperatures in cities gradually rise due to the heat island phenomenon, ground surface temperatures also rise, and the impact of the rise in surface temperatures slowly propagates through subsurface formations. Analyzing this propagation process, we can estimate how the thermal environment on the ground surface has evolved in the past from the present subsurface temperature distribution. We made detailed measurements of the temperature distribution down to a depth of around 200 meters mainly in groundwater observation wells in the target cities and the surrounding regions. Photo 1 shows the researchers making measurements of subsurface temperature profile at a groundwater observation well in the Bangkok area by gradually lowering a cable with a sensor attached to its tip into the well. This observation well is in a suburb at some distance from the center of the city, and it is surrounded by two or three-story houses and business establishments.



Photo 2



Photo 3

The observation wells are set up in a variety of public places including parks, temple grounds, and more often in schools. Photo 2 shows measurements being made at an observation well in the playground of an elementary school in Taiwan. At Xinzhuang City on the outskirts of Taipei, we could reach the observation well by opening a lid in the ground at a park neighboring a baseball ground (Photo 3).