

1. 業務概要

本業務では、効果的なヒートアイランド現象に対する適応策（暑熱対策）の導入促進のため、まちなかの暑さ対策ガイドライン改訂案の作成及び地方公共団体及び国民等における適応策導入の推進に資する検討調査を行った。

1.1 まちなかの暑さ対策ガイドライン改訂案の作成

「まちなかの暑さ対策ガイドライン（平成 28 年 5 月）（以下「ガイドライン」という。）」の改訂案を作成した。技術情報の更新及びコスト情報の時点修正を行った。また、導入事例等の情報を収集し、とりまとめた。暑熱対策技術の物理的効果や導入の際の留意事項等について、体系的な整理を行った。

なお、改訂案の作成に当ってはヒートアイランド現象に係る有識者らで構成する検討会を開催し、意見を得た。

1.2 適応策の適切な推進のための地方公共団体及び国民にむけた普及啓発

1) 地方公共団体等にむけた講習会の開催

ガイドラインについて、地方公共団体等の職員を対象とした講習会等を行った。講習会等は 7 回開催した（北海道・東北地区 1 回、関東地区 2 回、名古屋市 1 回、近畿地区 1 回、四国・中国地区 1 回、九州地区 1 回）。

ガイドラインの説明に際しては、1.1 の内容を反映した講習会のテキスト（80 頁程度）を作成し、対策技術の体験機会の設置、地方公共団体の取り組み紹介、組織間の連携促進等の内容を企画し、実施した。

2) 適応策の体験を通じた効果の検討

適応策の体験を通じた普及啓発方法を検討した。複数の技術を組み合わせた適応策の体験施設（面積約 12 m²）を夏季のイベントで 3 日間設置し、期間後に撤去した。利用者に対して、適応策の効果の示し方や導入場所等についてヒアリングを行った。

3) 適応策に関する情報発信

ガイドラインの導入用資料や「平成 28 年度余剰地下水等を利用した低炭素型都市創出のための調査・検証事業」で取りまとめた内容等を印刷し、イベントにおいて掲示や配布を行った。

4) 都市部の観光地における暑さ指数の検討

① WBGT の把握方法の検討

観光地での WBGT（湿球黒球温度）の把握方法を検討するにあたり、観光地の選定を行った。さらに、既に公開されている近傍の WBGT 公表値を用いて、観光地における WBGT を把握する方法を検討した。

②観光地での WBGT の情報提供に関する調査

WBGT の情報提供に関する事例や夏季の都市部の観光地での WBGT を発信する際の留意事項等を整理するため、地方公共団体を対象にアンケートを実施し、とりまとめた。

Study on Countermeasures against Heat Island Effects in Fiscal Year 2017

1. Abstract

The aim of this study was to create a revised proposal for the Guidelines on Measures against Heat in Cities and to perform activities that would inform municipalities and the people of Japan about countermeasures against heat island effects (hereinafter referred to as summer heat countermeasures) as a means to introduce effective summer heat countermeasures.

1.1 Creation of a revised proposal for the Guidelines on Measures against Heat in Cities

We created a revised proposal for the Guidelines on Measures against Heat in Cities (created in May 2016) (hereinafter referred to as the Guidelines). We updated information on technology related to the summer heat countermeasures and amended information about the costs of implementing the present summer heat countermeasures. We collected and summarized information on cases where the summer heat countermeasures have been introduced. We conducted a systematic examination of the physical effects of technology related to the summer heat countermeasures, as well as matters to be considered when introducing these countermeasures.

To create the revised proposal, we held a committee meeting to collect the opinions of experts working on heat island effects.

1.2 Activities to inform municipalities and the people of Japan about summer heat countermeasures

1) Holding seminars for municipalities, etc.

To promote the Guidelines, we held seven seminars for the staff of various municipalities: one seminar in the Hokkaido and Tohoku areas, two seminars in the Kanto area, one seminar in Nagoya City, one seminar in the Kinki area, one seminar in the Shikoku and Chugoku areas, and one seminar in the Kyusyu area.

We explained the Guidelines by creating a text for these seminars. The text was approximately 80 pages in length and reflected the contents of Section 1.1 above. We provided an opportunity for the participants to experience technology related to the summer heat countermeasures, introduced the municipalities' activities related to the summer heat countermeasures, and designed and executed a plan to promote cooperation among different organizations.

2) Examination of the actual effects of the summer heat countermeasures

We examined a method to inform municipalities and the people of Japan about the summer heat countermeasures through their own experiences. We installed a facility (an area of

approximately 12 m²) that combined multiple technologies and that allowed people to experience the summer heat countermeasures during a three-day summer event. The facility was removed at the end of the event. We conducted an interview survey of the facility users regarding which methods to use to exhibit the effects of the summer heat countermeasures and which places to introduce these countermeasures.

3) Transmission of information on the summer heat countermeasures

We printed documents to introduce the Guidelines and a summary of the “Study and Verification for the Creation of Low-carbon Cities that Utilize Surplus Groundwater, in fiscal year 2016,” and we posted and distributed these documents and the summary at our events.

4) Examination of wet-bulb globe temperature at tourist destinations in urban areas

(1) Examination of a method to explain wet-bulb globe temperature

We examined a method to explain wet-bulb globe temperature (WBGT) at several selected tourist destinations using the published WBGT values obtained for nearby areas.

(2) Investigation of the provision of information on WBGT at tourist destinations

We conducted a questionnaire survey for municipalities in order to determine which matters should be considered when providing information about WBGT at tourist destinations in urban areas during the summer. We also summarized the survey results.