

A Scientific Study on the Effects of Climate Change and Extreme Weather Events

المركز الإقليمي للتغير المناخي
The Regional Center for Climate Change



المركز الوطني للأرصاد
National Center for Meteorology
المملكة العربية السعودية



دراسة مناخية متقدمة

تأثير التغيرات المناخية والظواهر الجوية المتطرفة في
العاصمة المقدسة والمدينة المنورة

الهدف

إيجاد حلول مستدامة للتعامل مع الظواهر المناخية المتطرفة
وتحسين جودة الحياة في منطقتي مكة المكرمة والمدينة المنورة.

الأهمية

• دعم اتخاذ القرار المستند على علم البيانات

المحاور

• تحليل تأثيرات التغيرات المناخية على



The Regional Center for Climate Change (RCCC) has launched an advanced scientific study on the effects of climate change on the urban environment in the Holy Capital and Madinah, with the aim of finding sustainable solutions to deal with extreme weather phenomena and supporting the improvement of the quality of life in these two areas with religious specificity and exceptional urban planning.

The study discussed the most prominent challenges facing the urban environment, and the proposed scientific solutions, in a way that contributes to enhancing institutional cooperation and integrating national efforts in this field.

The study focused on a number of topics, most notably the analysis of climate change and its effects on the urban environment, the study of extreme weather patterns, and the applications of modern climate modeling, in addition to the use of advanced data to support urban planning, and proposing solutions to enhance adaptation and resilience to climate changes, in order to ensure the safety and comfort of visitors to the Two Holy Mosques.

The implementation of this study comes as part of the Regional Center for Climate Change's efforts to enhance specialized scientific knowledge, and as part of its work in supporting decision-making based on accurate climate data, in line with environmental developments and major development projects in the Kingdom that require comprehensive climate studies to sustain them.

The CEO of the National Center of Meteorology and General Supervisor of the Regional Center for Climate Change, Dr. Ayman bin Salem Ghulam, explained that this study is a key pillar to support adaptation strategies to climate changes in the Two Holy Mosques, pointing out that the center sought to provide viable scientific solutions that enhance the efficiency of future projects in the Holy Capital and Madinah.

For his part, the Executive Director of the Regional Center for Climate Change, Dr. Mazen Asiri, stressed that the study adopted a scientific and integrated approach in analyzing weather phenomena affecting the urban environment, and was keen to benefit from the best international practices, in order to ensure the provision of scientific outputs that support sustainable urban planning and keep pace with the requirements of national development.

The Regional Center for Climate Change held workshops, discussion sessions, and coordination meetings in the presence of representatives of a number of relevant government and research bodies, in addition to carrying out field studies in the central areas of the Holy Capital and Madinah, to ensure the comprehensiveness of the analysis and the realism of the proposed solutions