Noaa S National Climatic Data Center

To better understand our climate system, it is important that we have climate data records (CDRs)--time series of measurements of sufficient length, consistency, and continuity to determine climate variability and change--that possess the accuracy, longevity, and stability to facilitate credible climate monitoring. In 2004, the National Research Council (NRC) published Climate Data Records from Environmental Satellites to provide the National Oceanic and Atmospheric Administration (NOAA) with initial guidelines on how to develop and implement an effective CDR program. NOAA used this book to draft a plan for a new Scientific Data Stewardship (SDS) program, and then asked NRC to review it. The new program will be responsible for processing, archiving, and distributing observations from satellite and supporting ground-based platforms for monitoring, diagnosing, understanding, predicting, modeling, and assessing climate variation and change. The NRC review outlines several ways in which to improve NOAA's draft plan, most importantly by clarifying advisory mechanisms, providing more detail about how NOAA will coordinate with important partners in generating CDRs, articulating how the program will prioritize its activities, and developing ways to realistically project future costs. However, the draft plan is sound overall and NOAA should immediately begin implementing the SDS program while revising the plan as recommended in the book.

The U.S. Climate Change Science Program (CCSP), established in 2002 to coordinate climate and global change research conducted in the United States and to support decision-making on climate-related issues, is producing twenty-one synthesis and assessment reports that address its research, observation, and decision-support needs. The first report, produced by the National Oceanic and Atmospheric Administration (NOAA) in coordination with other agencies, focuses on understanding reported differences between independently produced data sets of temperature trends for the surface through the lower stratosphere and comparing these data sets to model simulations. To ensure credibility and quality, NOAA asked the National Research Council to conduct an independent review of the report. The committee concluded that the report Temperature Trends in the Lower Atmosphere: Understanding and Reconciling Differences is a good first draft that covers an appropriate range of issues, but that it could be strengthened in a number of ways.

Global Warming and the Risen LORD moves beyond the old debates about climate change to a new conversation focusing on the tremendous opportunities there are and the biblical and spiritual resources we have been given to meet this threat. Filled with inspirational stories and sobering scientific research, Rev. Ball shows us that global warming is one of the major challenges of our time, but one that can be overcome by following the Risen LORD.

The report outlines key elements to consider in designing a program to create climate-quality data from satellites. It examines historical attempts to create climate data records, provides advice on steps for generating, re-analyzing, and storing satellite climate data, and discusses the importance of partnering between agencies, academia, and industry. NOAA will use this report--the first in a two-part study--to draft an implementation plan for climate data records.

The National Oceanic and Atmospheric Administration (NOAA) collects and manages a

wide range of environmental and geospatial data to fulfill its mission requirements--data that stretch from the surface of the sun to the core of the earth, and affect every aspect of society. With limited resources and enormous growth in data volumes, NOAA asked the National Academies for advice on how to archive and provide access to these data. This book offers preliminary principles and guidelines that NOAA and its partners can use to begin planning specific archiving strategies for the data streams they currently collect. For example, the book concludes that the decision to archive environmental or geospatial data should be driven by its current or future value to society, and that funding for environmental and geospatial measurements should include sufficient resources to archive and provide access to the data these efforts generate. The preliminary principles and guidelines proposed in this book will be refined and expanded to cover data access issues in a final book expected to be released in 2007.

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"The following report of the Second NOAA Data Quality and Continuity Workshop contains summaries of issues and problems presented at the first workshop as well as papers on additional topics that have come to our attention since the the initial workshop. Material for some presentations that appear on the workshop agenda has been excluded based on overlap with other topics. Other papers that have recently come to our attention, but not presented at either workshop, have been included to highlight additional issues within NOAA"--Introduction

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The National Climatic Data Center is part of the U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (NOAA), and the National Environmental Satellite, Data, and Information Service (NESDIS). NCDC is the world's largest active archive of weather data. The Online Document Library provides access to datasets and publications of the Center.

1968- includes annual summaries.

This volume celebrates the 100th anniversary of the Association of American Geographers. It recognizes the importance of technologies in the production of geographical knowledge. The original chapters presented here examine technologies that have affected geography as a discipline. Among the technologies discussed are cartography, the camera, aerial photography, computers, and other computer-related tools. The contributors address the impact of such technologies on geography and society, disciplinary inquiries into the social/technological interfaces, high-tech as well low-tech societies, and applications of technologies to the public and private sectors. Geography and Technology can be used as a textbook in geography courses and seminars investigating specific technologies and the impacts of technologies on society

and policy. It will also be useful for those in the humanities, social, policy and engineering sciences, planning and development fields where technology questions are becoming of increased importance. Geography clearly has much to learn from other disciplines and fields about geography/technology linkages; others can likewise learn much from us.

1954- includes annual summaries.

Both the areal coverage of snow and the volume of water in its subsequent melt are of concern for the creation and maintenance of both hydroelectric power and local water supply. The interactive multisensor snow and ice mapping system (IMS) is a geographic interactive system that allows for both the viewing of various sensor data and the mapping daily both snow and sea ice extent by an analyst on one platform. This thesis investigates the agreement between the National Oceanic and Atmospheric Administration's (NOAA) interactive multisensor snow and ice mapping system (IMS) and snow depth values obtained from the National Climatic Data Center's (NCDC) observing stations in the North American region between 30 - 60° North latitude and 60 - 140° West longitude throughout January 2006 - February 2010. A comparative analysis is made on the basis of land cover, snow type, and snow depth. The first comparison is the most basic comparison. It is a general comparison station-by station between the two datasets. The second, third, and fourth comparisons are all attempts to further the analysis between the interactive multisensor snow and ice mapping system and National Climatic Data Center observing stations. The motivation behind these comparisons is to shed light on the strengths and weaknesses of the NOAA interactive multisensor snow and ice mapping system at different conditions. This knowledge may then be used for future IMS product development. The second and third comparisons involve supplemental datasets. These supplemental datasets are used to examine the role and effects of land classes and snow classes. A 0.5 km AVHRR land classification dataset is used in the second comparison. A 1 km snow classification dataset ii is used in the third comparison. The fourth comparison is an investigation into the effects of snow depth. In this case, the agreement between the NOAA interactive multisensor snow and ice mapping system (IMS) and snow depth values obtained from the National Climatic Data Center's (NCDC) observing stations is determined upon the placement of the stations into prescribed snow depth intervals. The results from the first comparison show a good agreement between the National Oceanic and Atmospheric Administration's (NOAA) interactive multisensor snow and ice mapping system (IMS) and snow depth values obtained from the National Climatic Data Center's (NCDC) observing stations. The agreement ranges from 79% - 100% throughout the study period. The results from the second comparison suggest that the correlation (%) between the snow extent of the Interactive Multisensor Snow and Ice Mapping system and the National Climatic Data Center snow depth values are higher for woodland and wooded grassland than the grassland and cropland. More insight as to the relation in the correlation

(%) ranges for the select land classes may be determined through further investigation. This may include investigations based on location or snow depth. The results from the third comparison suggest that the agreement between the two datasets is stronger for the ephemeral snow class and weaker for the maritime, warm taiga, and prairie snow classes. The higher values of correlation (%) for the ephemeral snow class is likely due to a larger number of match situations in which the NCDC observing station records 0 cm (no snow) and the IMS result is land (no snow). The results from the fourth comparison suggest that the agreement between the IMS and NCDC observing stations increases with increasing snow depth.