Projects and ActivitiesThu Mar 28 13:26:01 HST 2024

Name	Pacific Storms Climatology Products (PSCP)
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Operational Products and Services - Research/Development - Historical Observations (hindcasts/climatologies)
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Intra-annual to Decadal - Multi-decadal (scenarios)
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin

Description	Pacific Storms is focused on improving our understanding of patterns and trends of storm frequency and intensity - storminess - within the Pacific region. It is exploring how the climate-related processes that govern extreme storm events are expressed within and between three thematic areas: heavy rains, strong winds, and high seas. It is developing a suite of extremes climatology-related data and information products that can be used by emergency managers, mitigation planners, government agencies and decision-makers in key sectors including water and natural resource management, agriculture and fisheries, transportation and communication, and recreation and tourism. In-situ station products include the delineation of rates of sea level rise and high water return periods, as well as changes in the frequency of both short-lived intense rainfall events and extended periods of heavy rains and the linkages of these patterns and trends to climate indices. Observational data used to support product development are taken from standard holdings. In addition to the basic product set, special attention is being given to climate indices-related products that describe the relationship between extremes and climate, primarily through the correlation of extremes indicators and climate indices known to have relevance to the Pacific region (e.g., the Multivariate ENSO Index (MEI); the Pacific Decadal Oscillation Pacific Decadal Oscillation (PDO); the North Pacific Index (NPI); etc.) as well as the formulation of new integrated and/or regional indices.
Objectives/Outcomes	Users are able to explore how extreme events have been expressed historically and may be expected to be expressed in a changing climate. Such information is critical to risk assessment scenario development in support of coastal land-use planning and resource management. It also forms the basis for establishing infrastructure (e.g., roads, water, sewer) design criteria, among other things. The ultimate outcome of this effort will be a reduction in the vulnerability to the economic, social, and environmental risks associated with coastal storms, as decision-makers in the Pacific Islands are provided with high quality science-based information that enables them to understand, anticipate, and adapt to risks associated with coastal storm-related extreme events in the context of a changing climate: 1) A broad suite of in-situ station and remotely-sensed derived-data products for much of the Pacific Basin; and 2) The formulation of new integrated and/or regional climate indices.
Lead Agencies	NOAA/NCDC/Regional Climate Services
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Partnering Agencies	Pacific Storms is a collaborate effort involving a group of recognized agency and university-based experts in the area of climate-related processes that govern storminess. Strong winds, heavy rains, and high seas theme-specific teams have been formed to create derived data products. These teams include representatives from the NOAA National Climatic Data Center (NCDC), Center for Operational Oceanographic Products and Services (CO-OPS), and Coastal Services Center (CSC) through the Coastal Storms Program and UH SeaGrant, as well as the University of Hawaii Sea Level Center, University of British Columbia, University of Guam, and Oregon State University.

Required Resources	Funding is provided by the NOAA National Climatic Data Center (NCDC) and Coastal Services Center (CSC) through the Coastal Storms Program and UH SeaGrant and distributed to a range of agencies, institutions, and organizations in both the public and private sector in with a corresponding range of technical expertise in order to support data analysis and product development. The collaborative nature of this effort ensures that this project is leveraging NOAA and/or non-NOAA resources.
Projected Timelines	1) A broad suite of in-situ station and remotely-sensed derived-data products for much of the Pacific Basin. Most recent update Winter 2011. 2) The formulation of new integrated and/or regional climate indices. On-going.
Feedback/Evaluation	•Informal and formal requests for review and comment from users at various stages in the process. 1) Presentations and publications. 2) Regular project planning meetings with the project team. 3) Observed user response, including website hits and requests for information. 4) Number, type, geographic extent of stations/products.
Url	http://www.pacificstormsclimatology.org/