CNMI RELIES ON THE DIGITAL COAST

That's because the Digital Coast has a lot to offer CNMI.
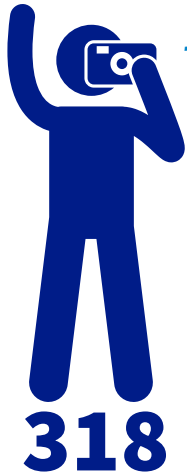
318
CNMI visitors to the Digital Coast.
(672,942 nationwide)

DATA
18 gigabytes of high-resolution elevation data available for CNMI.

TOOLS
50+ decision-support tools applicable for CNMI challenges.

TRAINING
Over **2,000** leaders in the U.S. used a Digital Coast training program.

GEOSPATIAL SERVICES
Over **$9.6 million** in private-sector geospatial services awarded Nationwide.

INFORMATION

- CNMI's coral reefs and associated ecosystems have an average economic value of $65 million per year.
- Forestry is CNMI's largest land cover category (49.21%).

SAVING TIME AND MONEY
411% was the return on investment calculated for the Digital Coast.

IT'S A WEBSITE.
NOAA owns the Digital Coast, but the resources inside, while vetted by NOAA for applicability and quality, come from various organizations with one common but important thread: content is solely focused on coastal community needs. The site contains not only data, but also the tools, training, and information communities need to make data truly useful. Three out of four Digital Coast users surveyed say they couldn't do their jobs without this important resource!

The short report that follows highlights Digital Coast interactions with the Commonwealth of the Northern Marianas Islands.

Digital Coast
coast.noaa.gov/digitalcoast

Commonwealth of the Northern Mariana Islands Recap

NOAA and the Digital Coast are devoted to supplying the Commonwealth of the Northern Mariana Islands with the data, tools, and information most needed by coastal communities. This report highlights the resources frequently used during this reporting period. Please visit the website (coast.noaa.gov) to learn more or contact NOAA (coastal.info@noaa.gov) with your questions or suggestions.

DATA

Data represent the core component of the Digital Coast. For the Commonwealth of the Northern Mariana Islands, data holdings include elevation, land cover, aerial imagery, and county-level socioeconomic data. Examples are highlighted below.

Coastal Lidar
coast.noaa.gov/digitalcoast/data/coastallidar
Over 18 gigabytes of high-resolution elevation data covering CNMI's entire coastal zone are available. These types of data are critical for all types of modeling, including those that predict flooding potential.

Land Cover
coast.noaa.gov/digitalcoast/data/ccaphighres
Land cover data provide inventories of coastal intertidal areas, wetlands, and adjacent uplands for coastal regions. These data are used to identify high-priority landscapes for CNMI's coastal protection and restoration efforts.

TOOLS

"Data alone is not enough" is a frequent Digital Coast refrain. Going the extra step and including the tools and training needed to make data truly useful is a hallmark of the Digital Coast website. Users have access to over 50 data analysis, visualization, and other decision-support tools. Examples are highlighted below.

OpenNSPECT
coast.noaa.gov/digitalcoast/tools/opennspect
This tool is being used to investigate potential water quality impacts from development, other land uses, and climate change. The tool simulates erosion, pollution, and their accumulation from overland flow. Uses include helping communities identify areas for restorable wetlands and riparian buffers to reduce pollution and flooding in watersheds.

TRAINING

Coastal officials have to stay on top of their game, which is why the Digital Coast's "training academy" provides over 125 learning resources, from online courses to training brought to your location. A few examples are provided below. To see the full suite, visit *coast.noaa.gov/digitalcoast/training/home*.

Coastal Inundation Mapping
coast.noaa.gov/digitalcoast/training/inundationmap
This classroom course provides baseline information about the various types of flooding and teaches methods for mapping current and potential flooding scenarios. The course offers 16 hours of continuing education credits for the GIS Professional (GISP) and American Institute of Certified Planners (AICP), and Certified Floodplain Manager (CFM) professional certifications.

Green Infrastructure Practices and Benefits Matrix
coast.noaa.gov/digitalcoast/training/gi-practices-and-benefits
Green infrastructure (also called natural infrastructure) is the way to go for communities looking to reduce flooding. This quick handout provides important information about some of the most common techniques in use.

Seven Best Practices for Risk Communications
coast.noaa.gov/digitalcoast/training/risk-communication
The title alone speaks to most people—this is a skill everyone benefits from. The Digital Coast has many resources devoted to this topic, but this online training course is particularly popular.

GEOSPATIAL CONTRACTING

Through the Digital Coast, coastal organizations in need of geospatial data or services benefit from the use of the Coastal Geospatial Services Contract (*coast.noaa.gov/idiq/geospatial.html*). This contracting vehicle provides a way for local, state, and federal agencies to use a streamlined process to obtain services from the nation's top geospatial firms. In fiscal year 2018, over $9.6 million was awarded to private geospatial firms to conduct mapping projects Nationwide, including the acquisition and processing of GIS data.

DIGITAL COAST IN ACTION

The following stories illustrate how Digital Coast users are applying geospatial information resources to address coastal issues in the Commonwealth of the Northern Mariana Islands and the Pacific Islands.

Visualizing Locally Relevant Sea Level Rise Scenarios
coast.noaa.gov/digitalcoast/stories/CNMI-SLR
Saipan is highly susceptible to the impacts of climate change and variability, especially rising sea levels. To be proactive, the territory's Division of Coastal Resources Management developed local flood maps and conducted an analysis of the situation using land cover data and the Sea Level Rise Viewer tool from NOAA's Digital Coast. This work influenced the development and implementation of a long-term plan for economic and ecosystem resilience.

Assessing Land-Based Threats to Coral Reef Habitats in Laolao Bay, CNMI

coast.noaa.gov/digitalcoast/stories/laolaobay

Land-based sources of pollution, including sediment, are one of the primary threats to coral reef environments for many island environments. Up-to-date and accurate maps combined with traditional ecological knowledge are needed to effectively manage these reef environments. Managers in CNMI used the Digital Coast's Nonpoint-Source Pollution and Erosion Comparison Tool and the Habitat Priority Planner to generate maps for use during a community-based watershed assessment process. The combination of these maps and traditional ecological knowledge created relevant information to assess current problems. Managers also will use these maps to develop ecosystem-based management plans and place-based conservation projects to address the decline in coral reef health.

Using Participatory Mapping Methods to Maintain a Safe and Healthy Saipan Lagoon

coast.noaa.gov/digitalcoast/stories/saipan-pgis

The reef-fringed Saipan Lagoon is a focal point for recreational, commercial, and extractive uses by tourists and residents alike. Managing the lagoon as a sustainable resource to be enjoyed by all requires accurate knowledge of where specific activities regularly take place. The Saipan Division of Coastal Resources Management and partners surveyed local stakeholders using participatory GIS to determine where people engaged in various activities at a community workshop. NOAA's Office for Coastal Management facilitated the workshop and advised the partners on best practices for participatory GIS uses. The survey resulted in the most detailed use maps to date. These data will be used to inform management priorities and regulatory decisions for the Saipan Lagoon and serve as the basis for the Saipan Lagoon Use Management Plan.

The Digital Coast Partnership

One of the goals of the Digital Coast is to unify groups that might not otherwise work together. As a result, the Digital Coast Partnership is building not only a website, but also a strong collaboration of coastal professionals intent on addressing common needs. Currently, the eight members of the Digital Coast Partnership include the American Planning Association, Association of State Floodplain Managers, Coastal States Organization, National Association of Counties, National Estuarine Research Reserve Association, National States Geographic Information Council, Nature Conservancy, and Urban Land Institute. The responsiveness of these organizations and the direct lines of communication fostered by the effort have proven essential for ensuring the success and continuing relevance of the Digital Coast, and for allowing the platform to evolve and adapt to changing needs and priorities.