



CASE STUDY

PHILIPPINE DEPARTMENT OF AGRICULTURE

# MAXAR

## SATELLITE IMAGERY HELPS AGRICULTURAL DEVELOPMENT IN THE PHILIPPINES

Although the most common association with the Philippines may be the industrialized cities of Manila and Quezon City, the country's economy is primarily driven by agriculture. The Department of Agriculture charged with policy development and providing support services for the industry, is now embarking on Maxar satellite imagery to assist in planning and decision making process.

### Seeking a broad impact

Agriculture, livestock and fishing employs more than 40 percent the Philippine's 98 million residents and represents 20 percent of its GDP. With the mission of the Department of Agriculture to empower the farming and fishing communities to produce accessible and affordable food for every Filipino and provide a sufficient level of income for everyone in the industry, the Department is continuously seeking new methods to improve services to its constituents.

"The Department recognize that precise spatial information would provide a wealth of beneficial data to both spot vulnerabilities and to improve productivity," says Josephine Minerva, executive vice president and chief operating officer for Maxar information partner Geo-Surveys & Mapping, Inc. (GSMI). "They were using spot imagery that was incomplete, out of date and not very high resolution."

### Mapping the entire archipelago

In the fall of 2012 GSMI began delivery of GeoEye-1 and WorldView-2 imagery for both coastal and terrestrial areas. The project will cover the entire Archipelago spanning an area of more than 300,000 square miles consisting of 7,107 islands with more than 22,000 miles of coastline.

"We are working very closely with the Department to help prioritize and determine the applications of the technology," Minerva says. "With Maxar imagery we were able to offer the most competitive bid and satisfy their technical criteria. We want to ensure they maximize their resources and develop applications of the data that provide measurable benefits."

### COMPANY INFORMATION

Established in 1994, Geo-Surveys & Mapping, Inc. (GSMI) is a pioneer in the provision of topof-the-line geomatics solutions for surveying, mapping, remote sensing, GIS, and systems integration in the Philippines. GSMI houses a full line of sophisticated equipment and technology from data acquisition, film processing, scanning, and digital mapping to GIS and remote sensing for geodata management and analysis.



PHILIPPINE ISLANDS



## A wealth of applications

The Department considers the imagery the basis for improving delivery of services with the establishment of a database for existing agriculture and fishery resources which will be used to determine gaps and vulnerabilities.

"High-resolution imagery will give the Department the ability to characterize production environments, better manage distribution networks and minimize risks of resource investment," Minerva says.

With an extensive library of historic imagery, the Department will have the ability to measure changes to the environment over time. For example, they plan to measure fishpond and mangrove areas against imagery from 1990, 2000 and 2010; analyze areas of sea grass and coral reefs from imagery captured in that same time period for temporal analysis and environmental assessment; and crosscheck property boundaries to determine the locations of private fishponds.

"The Department will have a true benchmark of change to make better informed decisions moving forward," Minerva says.

## An array of services

With a broad mandate to provide the policy framework, public investments and support services needed for domestic and export-oriented business enterprises across farming, fisheries and livestock, the Department is looking to GSMI to help maximize its investment in Maxar imagery.

"The availability of high-resolution imagery for the entire country presents a first time opportunity," Minerva says. "From developing decision-support maps based on farm area, vulnerability, flooding, landslides and typhoons, to measuring the effects of climate change on our forests and reefs, we plan to work side-by-side with the Department to provide the training, support and technology services they need to maximize this new wealth of information."

### Solution

Maxar information partner GSMI procured GeoEye-1 and WorldView-2 imageries for both coastal and terrestrial areas of the entire Archipelago to establish a database of existing resources from which to make policy decisions moving forward.

### Results

Alongside GSMI, the Department is developing a wealth of applications from decision-support maps based on farm area vulnerability to planning and implementation of strategic agriculture and fisheries development zones.

### INDUSTRY

- » Agriculture

### USES

- » Management of Resources
- » Planning
- » Agricultural Monitoring

### PRODUCTS USED

- » Geoeye-1, Natural Color and 4-band
- » WorldView-2, Natural Color, 4-band and 8-band