

## Experiment demonstrates the potential of GMES Security services to contribute to the fight against drug trafficking in the Caribbean



THE CARIBBEAN BASIN IS A VORTEX FOR DRUG SMUGGLING BY SHIP BETWEEN PRODUCTION ZONES IN SOUTH AMERICA AND DESTINATION MARKETS OF EUROPE AND NORTH AMERICA. LIMES, A GMES PROJECT, HAS TESTED NEW MONITORING SERVICES TO SUPPORT NAVAL AND LAW ENFORCEMENT ACTIVITIES IN THE AREA.



Lieutenant Commander  
Benoît-Xavier Huet

“Sea surveillance of ships suspected of drug smuggling poses specific sets of challenges. In the Caribbean zone, located far from France’s main coastline, France has no permanent surveillance equipment such as signal stations, and some portions of the sea expanses are hard to monitor because of their sheer size. In addition, drug traffickers use a broad range of ship types – from slow ships of varied materials ranging from wood to resin, all the way to « go fast » boats as we call them.

We were pleasantly surprised with the information we received from GMES service providers through LIMES. Only two hours after the satellite overpass, we would be handed pre-processed imagery from which we could work.

Of course nothing replaces the human eye and there are limitations. For the time being, some of the satellites come around only every 48 hours, while optical sensors will never see through clouds. On certain sets of images ships less than 30 metres long are not visible and, finally, the 2-hour delay required for processing and transmission can be significant if you need to locate a ship in order to prepare an immediate intervention at sea.

That being said, GMES products are very promising tools, as they are well suited for large oceanic areas with little ship traffic. They also allow for the sort of low-profile surveillance that such operations require. Finally, performance is likely to get even better as:

- GMES imagery gets integrated with data from other sources,
- Processing techniques further progress to allow detection of ships under ten metres, while processing time is brought under half an hour,
- More optical and radar satellites become available, allowing at least a daily coverage of the area.”

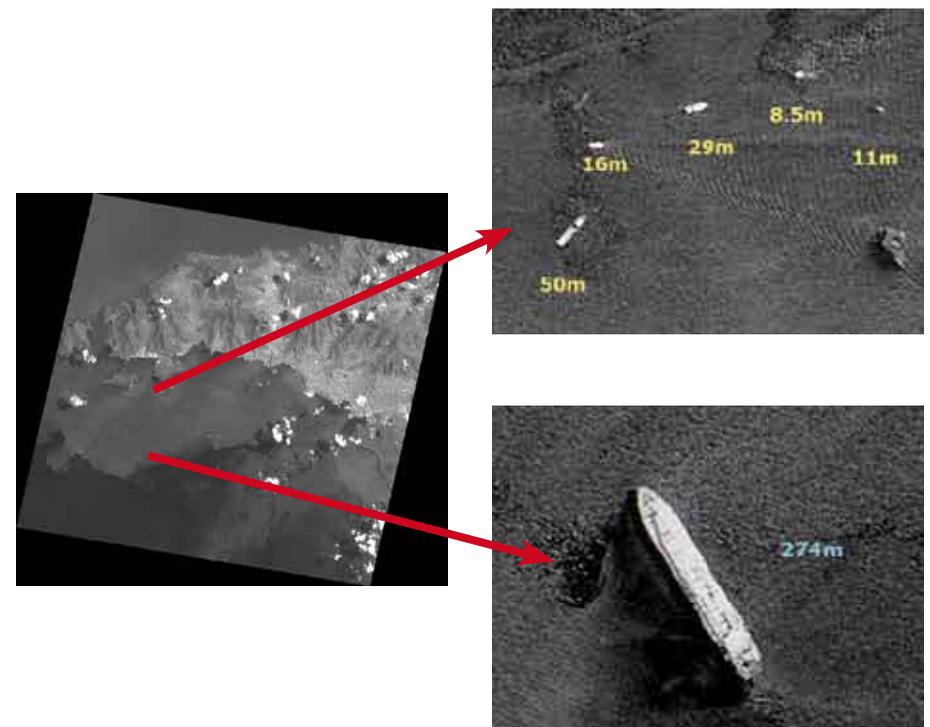
Lieutenant Commander Benoît-Xavier Huet,  
Head of the Maritime Intelligence Coordination Cell,  
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### THE LIMES CARIBBEAN EXPERIMENT

Within LIMES (a GMES Security project), a 30-day long experiment in the Caribbean was conducted in June 2008. Its purpose was to provide satellite imagery (optical and radar) of boat traffic in distant maritime areas. It focused on two main requirements specific to the job at hand: sorting through a broad range of observation targets, and quickly processing and delivering information.

The end user was the French Navy (COMAR Fort de France, in the French *département* of Martinique) which participates in the anti-smuggling operations for the benefit of OCRTIS (the French anti-drug law enforcement unit). The LIMES partners operated out of four locations on both sides of the Atlantic: in Cayenne, French Guyana (EADS Astrium, Spot Image and Nevantropic), in Fort-de-France where the European Union Satellite Centre (EUSC) had positioned a GMES image analyst to assist the user throughout the experiment, in Ispra (Italy) at the European Commission’s Joint Research Centre, and in Spain at EUSC’s facilities.

As many as five satellites were used. Imagery was of two types – very high resolution for coastal and island zones, and high resolution for larger, high sea areas.



Ship detection from a wide-area satellite picture enabling determination of ship size and direction (Credits: LIMES).