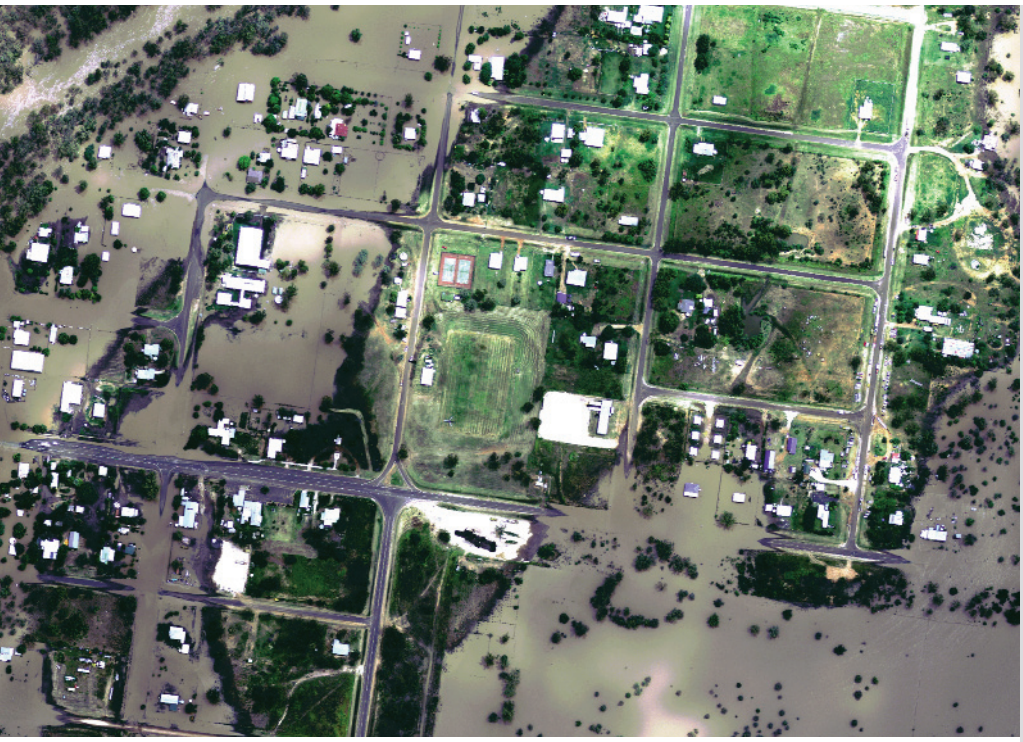
Leica Geosystems TruStory
Leica ADS40 captures Queensland Floods



The imagery of flooded areas in Queensland was capured with a Leica ADS40 in 25cm resolution.

Beginning in December 2010, a series of floods affected Australia, primarily the state of Queensland, and forced the evacuations of thousands of people from their homes. Three quarters of Queensland were declared a disaster zone, leaving 35 people dead and declared 9 missing. The damage to Australia's GDP is said to be A$ 30 billion. In order to provide situational awareness to reconstruction activities in severely flood affected communities imagery was captured by the ICE Team using the Leica ADS40 Airborne Digital Sensor.

Throughout January and February 2011, the Australian Army's 1st Topographical Survey Squadron has had a watchful eye over Queensland's flood affected areas.
The goal was to capture very accurate flood lines for more than 100 of Queensland's hardest hit communities to prepare for future events and use the information as a tool during flood disasters. The end result will be an aerial image of the affected areas in Queensland with an overlay showing the flood line. The citizens will have free access to these maps on an interactive website, which is a definite first.

After being recalled at short notice in January, the Imagery Collection and Exploitation (ICE) Team from within the Squadron was dispatched in support of the QLD FLOOD ASSIST Operation to provide situational awareness to reconstruction activities in severely flood affected communities.

Organization
1st Topographical Survey Squadron
Australian Army
Australian Defence Force
http://www.defence.gov.au/

Challenge
- Capture the flooding extent of the disaster that hit Queensland communities
- Due to the extensive flooding image acquisition was needed every day, even in inclement weather

Project Period
January/February 2011

Queensland/Australia

Solution
- Leica ADS40 Airborne Digital Sensor combined with the rapid processing capabilities of Leica XPro Software give the Australian Defence Force an accurate and timely picture of the extent and severity of the flood

Result
- Leica ADS40 Airborne Digital Sensor acquires superior images in adverse conditions
- Timely generation of Digital Surface Models (DSM) of affected areas

The flood forced the evacuations of thousands of people from their homes.

Benefits

- The rapid processing capabilities of Leica XPro Software gave daily guidance for reconstruction activities

The ICE Team worked in conjunction with RAAF 38 Squadron elements that operate a modified KingAir B350 aircraft. They captured imagery in and around Brisbane, as far West to Roma, North to Gladstone and South to Hebel, NSW.

Although weather throughout the operation was not conducive to effective aerial imagery capture, the ICE Team continued to fly daily capturing opportune targets and processing imagery around the clock to ensure outputs were delivered on time to its many customers.

Imagery was captured by the ICE Team using the Leica ADS40 Airborne Digital Sensor. The ADS40 sensor captures digital imagery, and is able to generate surface models of targeted areas of the earth's surface. This capability is a quantum leap ahead of previous imagery capture techniques used by the Army.

The ICE Team was complimented by two Leica Sensor Support Technicians – Jacques Markram (flown to Australia) from the Leica Head Office in Heerbrugg in Switzerland, and Mal Hentschel who helps support all sensor systems worldwide, but is based in the Australasia / SE Asian region.

Most units deployed as part of OP QLD FLOOD ASSIST ended their support in late January; the ICE Team continued its capture efforts until 18 February 2011, and will continue the exploitation of this imagery in the coming months.

The team's professionalism and effective use of its assets became of particular interest to the Queensland State Government's - Department of Environment and Resource Management and the Queensland Reconstruction Authority.

Both organisations will continue to exploit the imagery captured and generated by the ICE Team in assessing and prioritizing the reconstruction efforts throughout Queensland.

Leica ADS40 Airborne Sensor equipment used by the ICE Team.

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