![AAM logo]

CASE STUDY:
Emergency Flood Mapping in Victoria with RADAR dataset:

OVERVIEW

In June 2012, AAM was contracted by the Victorian Department of Sustainability and Environment (DSE) to assist with acquiring Radar Satellite imagery to capture a significant flash flooding event that affected the Gippsland region of Eastern Victoria, spanning an area of more than 15,000km².

SITUATION

Radar imagery was collected to ensure that if the concurrent aerial survey could not occur due to weather conditions, there would still be flood extent information available. While it was critical that the data was captured within 1-2 days from order placement, each site had to be 'imaged' as close as possible to the predicted 'flooding peak'. AAM recommended radar imagery as it has the added benefit of capturing large areas quickly and efficiently, ensuring that we would meet our client's needs.

ACTION

Due to the limited time available and worsening weather conditions, AAM recommended acquisition of cloud-penetrating COSMO-SkyMed radar satellite imagery, a four satellite constellation, which can acquire radar imagery at a spatial resolution ranging from 1m-100m, during daylight and evening hours. AAM also recommended imagery analysis to highlight the areas where flooding had occurred. The single post-flood event images were used and classified, extracting reference information from a worldwide geo database that incorporated a large number of open source datasets including OpenStreetMap and SRTM Water Bodies.

RESULT

AAM was able to successfully coordinate the acquisition and delivery of two, 5m pixel resolution radar satellite images and flood masks (vector layer) utilising the COSMO-SkyMed constellation within the client's required timeframe. All deliverables were supplied to the agreed specification which permitted easy and immediate integration with DSE's data portal, thus enabling access by all required project stakeholders. The project was completed and delivered within a period of 4 days from initial enquiry.