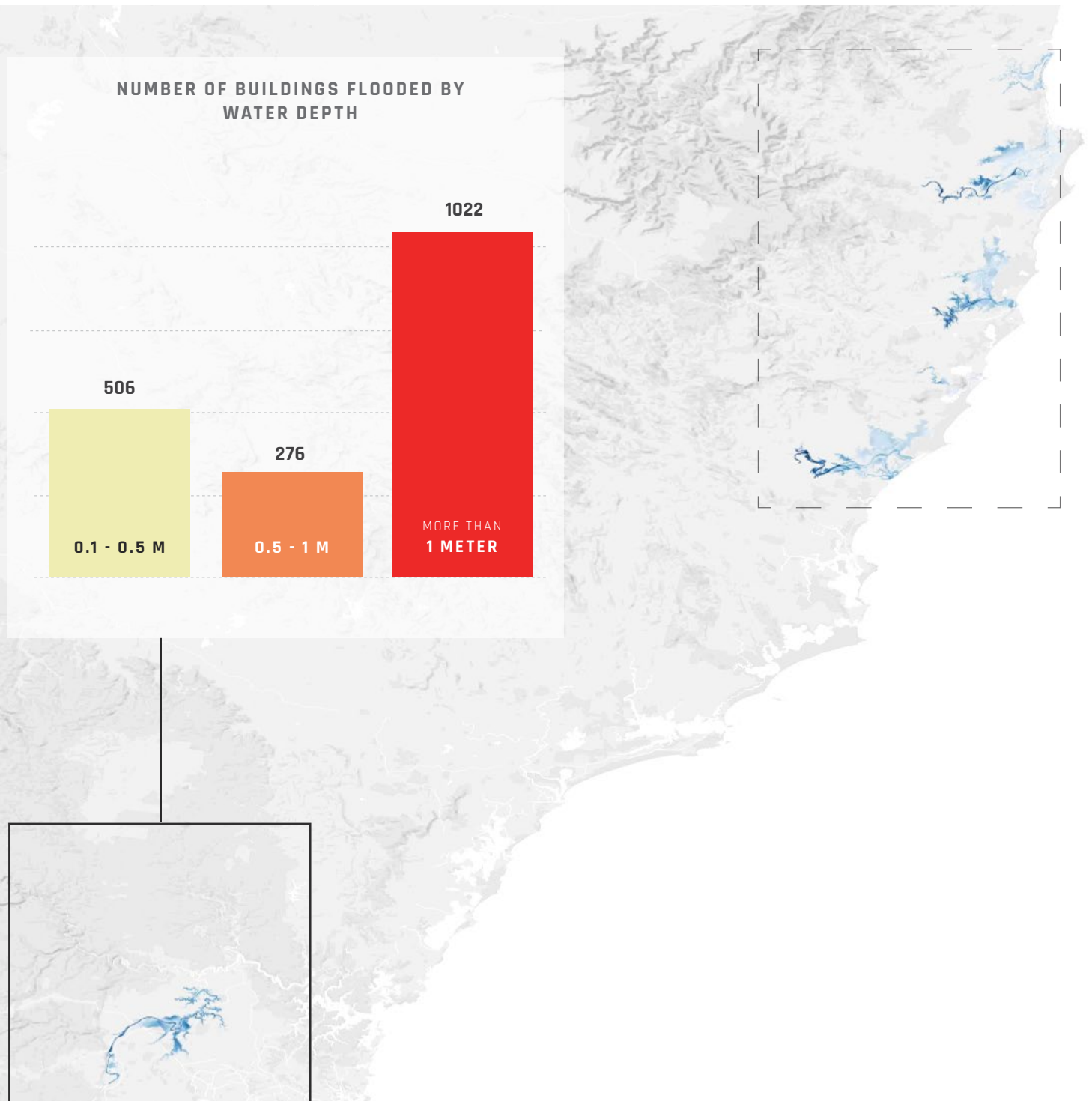


PART 2: FLOODING IN NORTHWESTERN SYDNEY SUBURBS, AUSTRALIA



FLOOD BRIEFING SERIES
WITH ICEYE SAR SATELLITE CONSTELLATION DATA





**MORE
THAN 1,800**

buildings were flooded
in the observed area



**APPROXIMATELY
2 METERS**

avg. flood depth for impacted
buildings in ICEYE's analysis

As the heavy rains continued across parts of New South Wales, the historic flooding, which began along the Mid North Coast on March 20th, 2021 (see [Part 1: Flooding in New South Wales, Australia](#)), rapidly expanded to parts of the northwestern suburbs of Sydney.

Sydney received over 100 mm of rain (~ 4 inches) on March 21st, on top of up to 200 mm of rain the week before which resulted in the worst flooding in the area in 60 years.¹ Rain continued to fall on March 22 and 23, leading to a prolonged flood event. The Warragamba Dam began overflowing on March 20th² and is expected to continue to do so for several days. Many residents in the area were ordered to evacuate, bringing the total evacuations across the state to over 18,000 residents³.

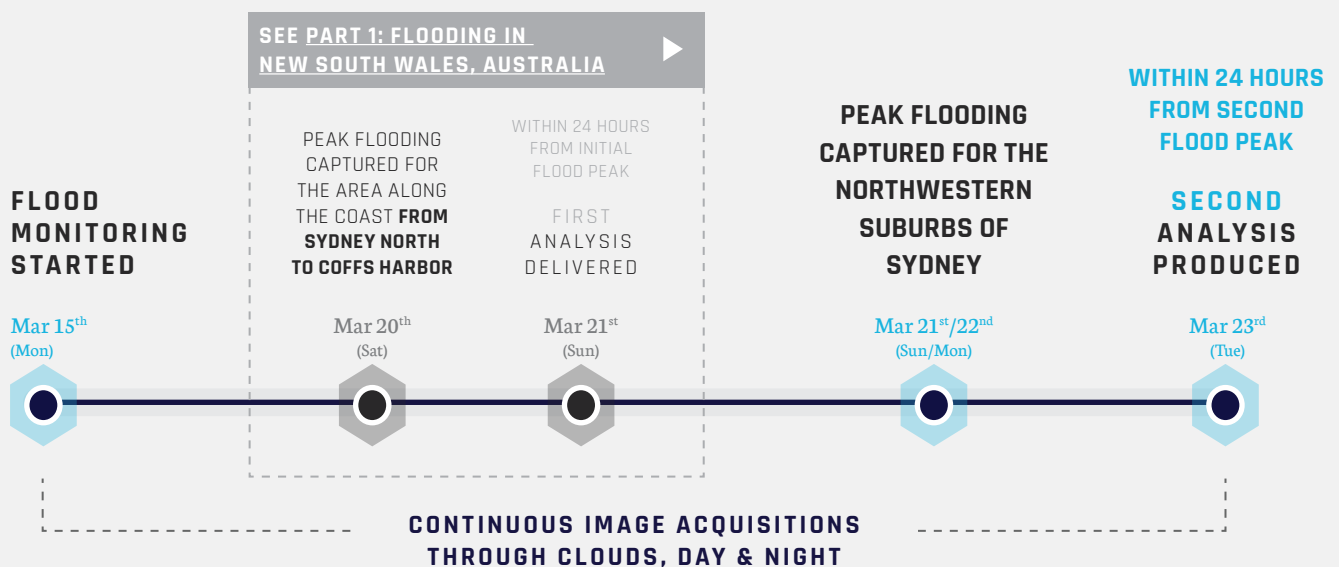
Within 24 hours of the flood peak which occurred during March 21st and 22nd, ICEYE produced a flood extent and depth analysis over an area of approximately **4,500 km²**. The results show more than **130 km²** of flooding in the northwestern Sydney suburbs. More than **1,800 buildings** were inundated, with the worst-hit locations in the Windsor and Richmond areas. These locations had an average building-level water depth of nearly **2 m**, with many properties seeing water levels well above the first floor.

References

¹ www.reuters.com/article/us-australia-weather-idUSKBN2BE011

² www.theguardian.com/australia-news/2021/mar/20/nsw-floods-sydney-battered-by-rain-and-mid-north-coast-evacuated-amid-wild-weather

³ phys.org/news/2021-03-fresh-deluge-worsens-year-australia.html



BENEFITS FOR THE INSURANCE INDUSTRY

PAY POLICYHOLDERS
FASTER

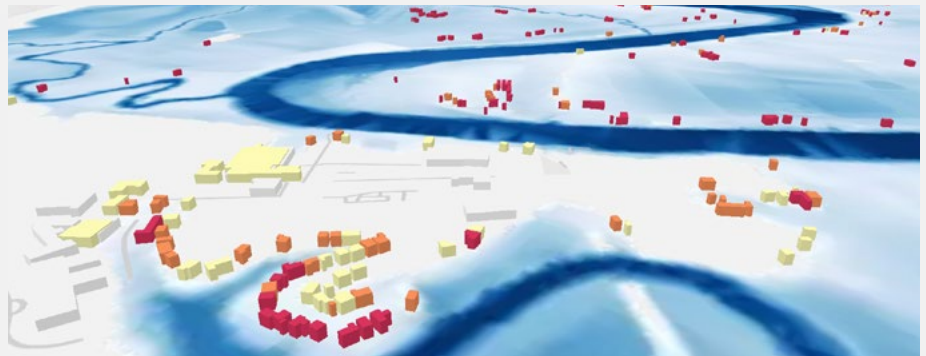
PROACTIVELY
ENCOURAGE CLAIMS

DIRECT FIELD
RESOURCES
WITH CONFIDENCE

SIZE EVENT LOSSES
ACCURATELY **WITHIN**
DAYS, NOT WEEKS

ENABLE
PARAMETRIC
OFFERINGS

ENABLE **NEW**
TERRITORIES



Visualization of ICEYE flood analysis from Windsor, North South Wales, Australia. *

VALUES FOR INSURANCE FROM ICEYE FLOOD DATA OF FLOODING IN AUSTRALIA

ICEYE's unique SAR satellite constellation and commitment to flood monitoring could enable:

- ▶ Hundreds of flood claims to be remotely assessed or even paid instantly for the most severely flooded locations
- ▶ An automated, pre-emptive, and proactive claim response with customer communication to reduce call handling resource requirements and customer call wait times
- ▶ Emergency accommodation to be proactively and accurately booked and assigned to impacted customers
- ▶ (Re)insurers and government organisations to estimate the total insured and uninsured losses in a matter of hours or days, rather than weeks or months
- ▶ Insurers to understand the impact on their reinsurance program and provide early and accurate market updates
- ▶ Disaster relief and emergency funds to be prioritized into the worst-hit areas and adjusters directed to locations that could not be instantly resolved
- ▶ Damage mitigation services to be deployed quicker to prevent further losses from mold and mildew growth, foundation and structural damage, or prolonged temporary accommodations and business interruption claims

*Data sources

Building footprints from Microsoft (<https://github.com/microsoft/AustraliaBuildingFootprints/blob/main/README.md>)

River gauge data from Commonwealth of Australia Bureau of Meteorology <http://www.bom.gov.au/nsw/flood/>

DEM data from Commonwealth of Australia (Geoscience Australia) <http://www.ga.gov.au/copyright>

Visualization of ICEYE flood analysis from
Wilberforce, New South Wales, Australia

ICEYE

**TALK TO SALES & GAIN ACCESS
TO OUR DETAILED ANALYSIS**

www.ICEYE.com/flood

