Global High-Res. DEM

GFDRR, World Bank, Google, White House CEQ, US State Department, Climate Central, NASA, United Nations, University of Bristol, USGS, SecondMuse, CRCSI Australia

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Scaling up Open Data for Disaster & Climate Resilience

Overview

Generating a global high-resolution, high-accuracy DEM

- Current global DEMs that are freely available (SRTM-DEM, ASTER GDEM, ACE-2, WorldDEM?, enhanced SRTM-DEM project?) do not meet accuracy & resolution requirements for most impact applications (e.g. floods, landslides, local climate change impacts, etc.)

- Challenge: fused product from different technologies (LiDAR, high-res stereo-pair sat. imagery, single pass airborne SAR interferometry (NASA heritage/commercially available), ortho-photography?, etc.) that can be freely shared thru Google
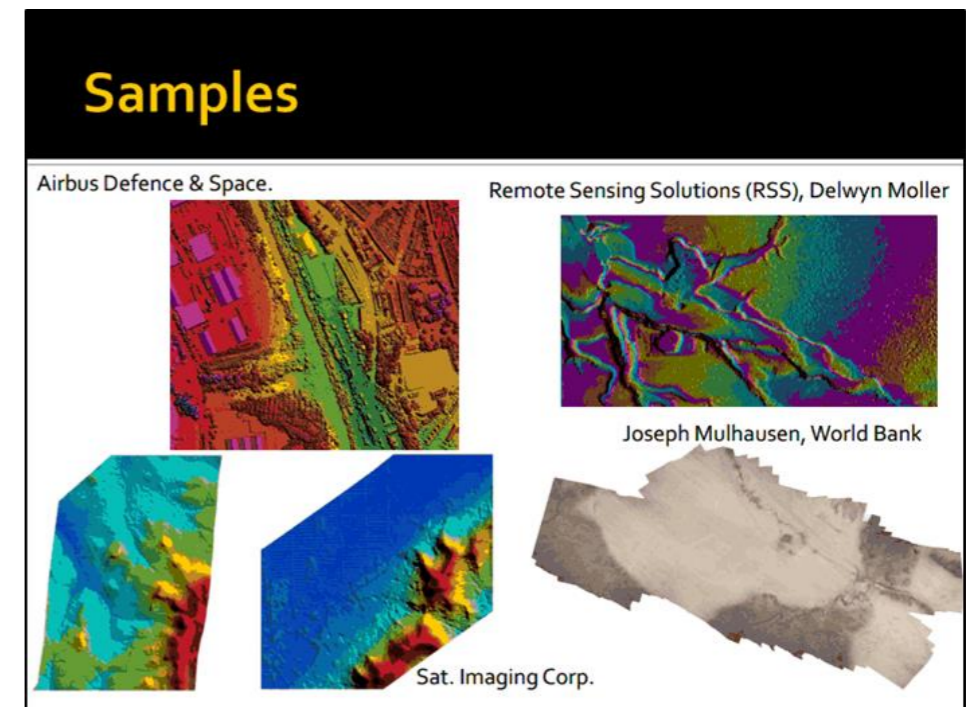

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Technology: Fight floods on a global scale

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Challenges & opportunities

Challenges

- **Creating the global high-res DEM:** different data sources; data sharing; funding sources

- **Applications:** e.g. Global flood model (community & research platform)

Opportunities

- **Unique partnership:** GFDRR, World Bank, Google, White House CEQ, US State Department, Climate Central, NASA, United Nations, University of Bristol, USGS, SecondMuse, CRCSI Australia

- **Already available:** thru Google – (i) CA bathy raster, (ii) high number of Australia coastal LiDAR files, (iii) DEMs of different resolutions for some regions worldwide with basic GIS-type processing (e.g. relief shading)

- Setting intl. standards for high res. DEM acquisition and processing (CRCSI Australia, USGS)

- High impact applications and research & huge societal benefits
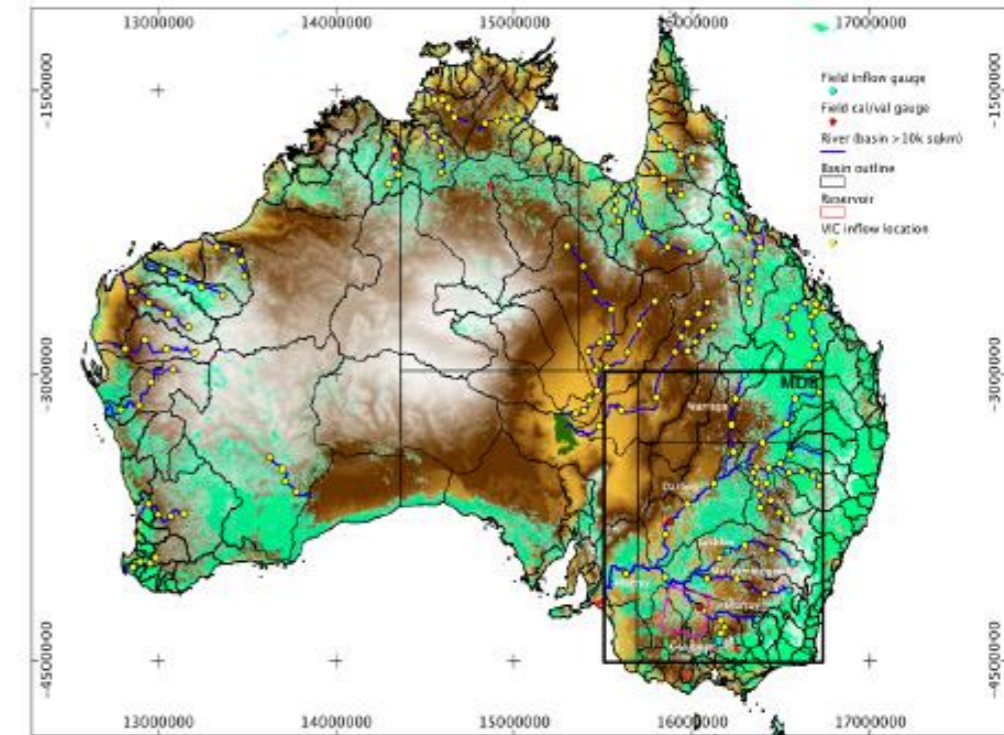
Research Topic

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A global high-resolution digital elevation model: a paradigm shift in high impact research and applications

Topic Editors:
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