

# UAV for Disaster Assessment

The second time SPC uses Unmanned Aerial Vehicles for post disaster mapping. In April 2014, a copter UAV was mapping flooded areas in Honiara, Solomon Islands. This UAV was brought from Germany. Within three days (i) the flood extent of the Mataniko river was mapped, (ii) image data and a digital elevation model (DEM) were produced for an alternative settlement area, (iii) a high resolution DEM was produced from a dam keeping contaminated water and (iv) detailed images were produced from an abandoned mining camp to document locations of potential explosives and chemicals.

This year, SPC has an own UAV which is a fixed wing type. This was sent to Vanuatu to help in the post disaster damage assessment. In addition, the German Ministry of Economic Cooperation and Development (BMZ) supported the Copter- Disaster Assessment through GIZ by financing Mr. Teja Kattenborn from Südwest-Geocoopter to bring back the copter type UAV. The purpose is to calibrate the damage assessment carried out with satellite image data and to survey areas where no cloud free space born image data were available.



Now, both UAVs are working in synergy. The SPC fixed wing covers larger areas within short time. The copter UAV has the potential to fly slow which support high image resolution and is capable to look onto the objects from different view angles and fly around larger infrastructure elements. These options allow the creation of three dimensional datasets without shadow effect. The fixed wing and the copter UAV produced image data and DEMs can be merged to seamless datasets.

This time the team stays three weeks and has the potential to survey larger areas. The team also is equipped with survey grade GPS employed for ground control points in centimetre precision.



*One of the outputs is image data coverage of high resolution exactly geometrically rectified. This can be superimposed over the satellite image data.*