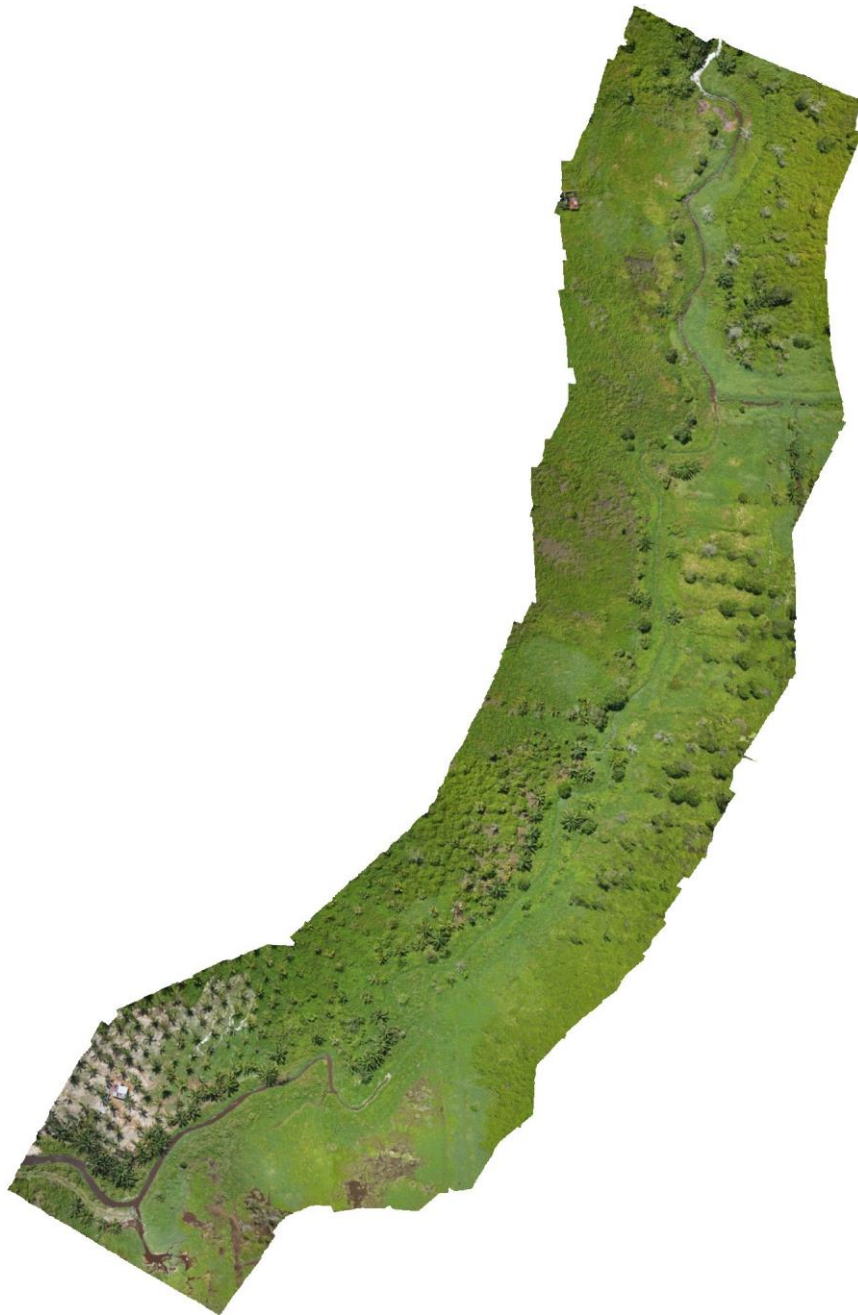


Pemetaan Penyempitan Aliran Sungai Sungai Sibam Kelurahan Sungai Sibam – Kecamatan Binawidya

**Processing Report
01 June 2022**



Panjang Penyempitan



Panjang : 697 Meter

Koordinat : 0.5234957973601184, 101.36518473624265

Survey Data

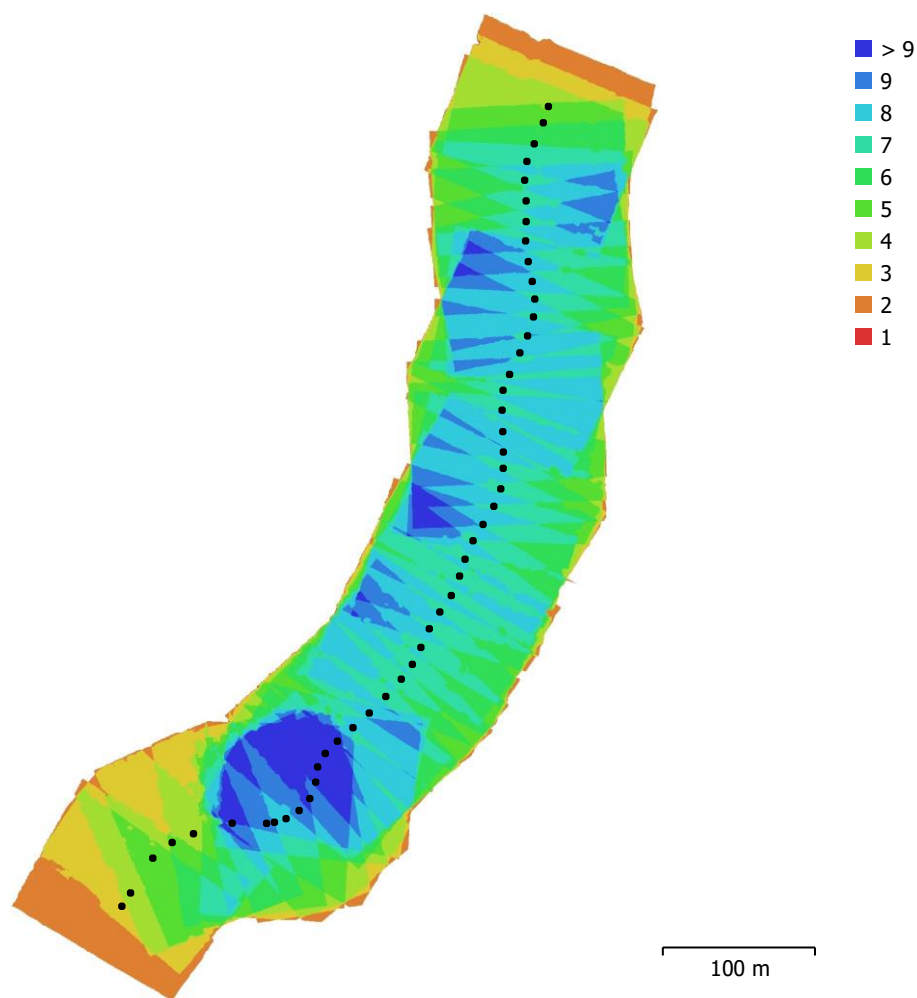


Fig. 1. Camera locations and image overlap.

Number of images:	50	Camera stations:	50
Flying altitude:	97.8 m	Tie points:	13,586
Ground resolution:	3.18 cm/pix	Projections:	35,404
Coverage area:	0.0947 km ²	Reprojection error:	3.23 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
Test_Pro (4.5mm)	4000 x 3000	4.5 mm	1.62 x 1.62 μm	No

Table 1. Cameras.

Camera Calibration

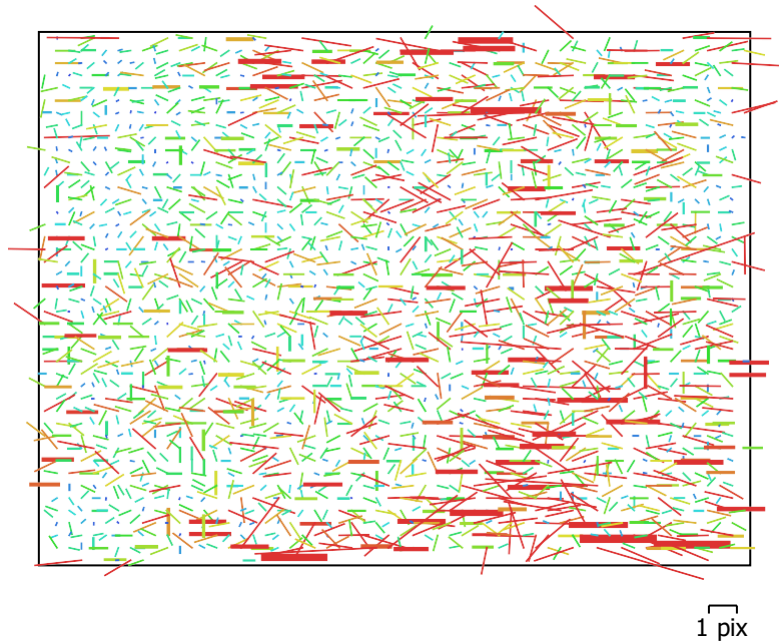


Fig. 2. Image residuals for Test_Pro (4.5mm).

Test_Pro (4.5mm)

50 images

Type	Resolution	Focal Length	Pixel Size
Frame	4000 x 3000	4.5 mm	1.62 x 1.62 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	2979.63	1.9e+02	1.00	-0.24	-0.12	-0.79	0.99	-1.00	0.22	0.17
Cx	14.9637	4.6		1.00	0.06	0.22	-0.26	0.26	-0.33	-0.06
Cy	10.3019	3.8			1.00	0.11	-0.13	0.12	-0.05	0.21
K1	-0.0332946	0.0053				1.00	-0.78	0.78	-0.21	-0.14
K2	0.177819	0.047					1.00	-1.00	0.21	0.17
K3	-0.195318	0.077						1.00	-0.22	-0.17
P1	0.000418066	0.00038							1.00	0.07
P2	0.000731805	0.00032								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

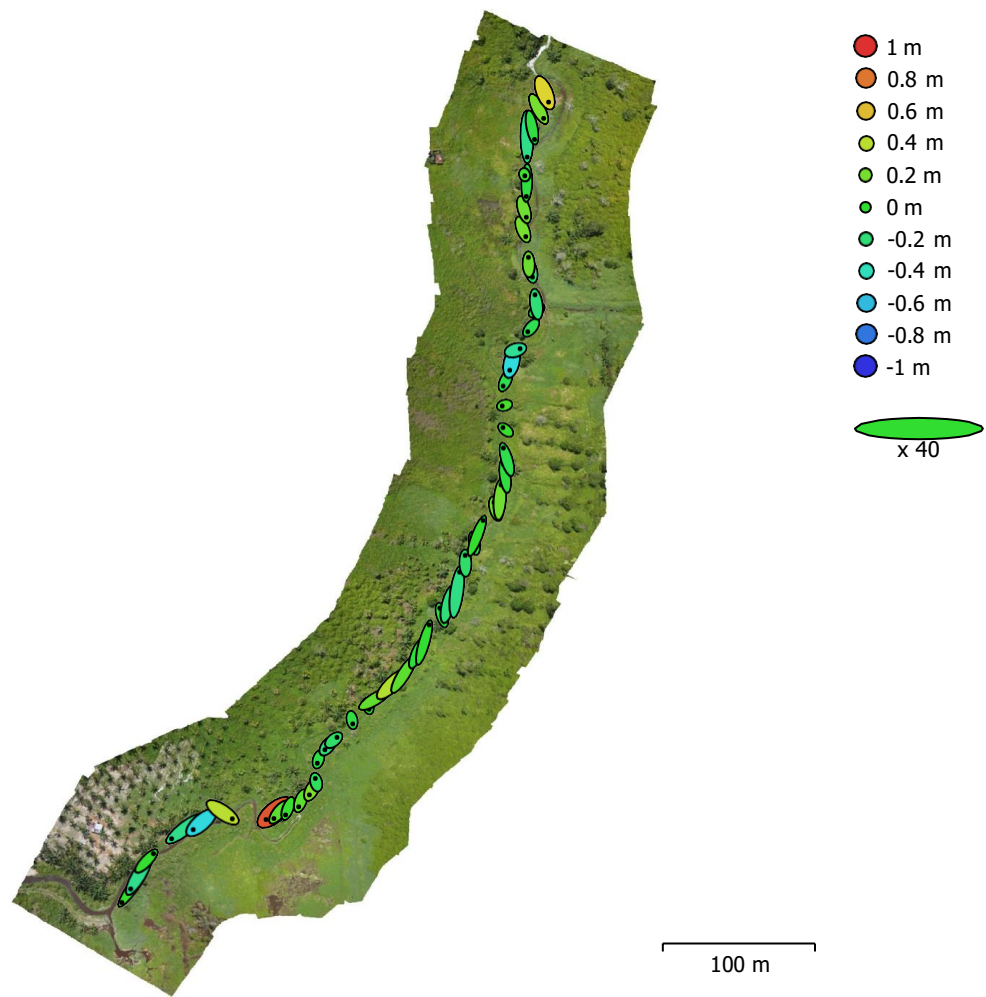


Fig. 3. Camera locations and error estimates.

Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.
Estimated camera locations are marked with a black dot.

X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total error (cm)
16.1392	30.898	23.8242	34.8592	42.2227

Table 3. Average camera location error.
X - Longitude, Y - Latitude, Z - Altitude.

Digital Elevation Model

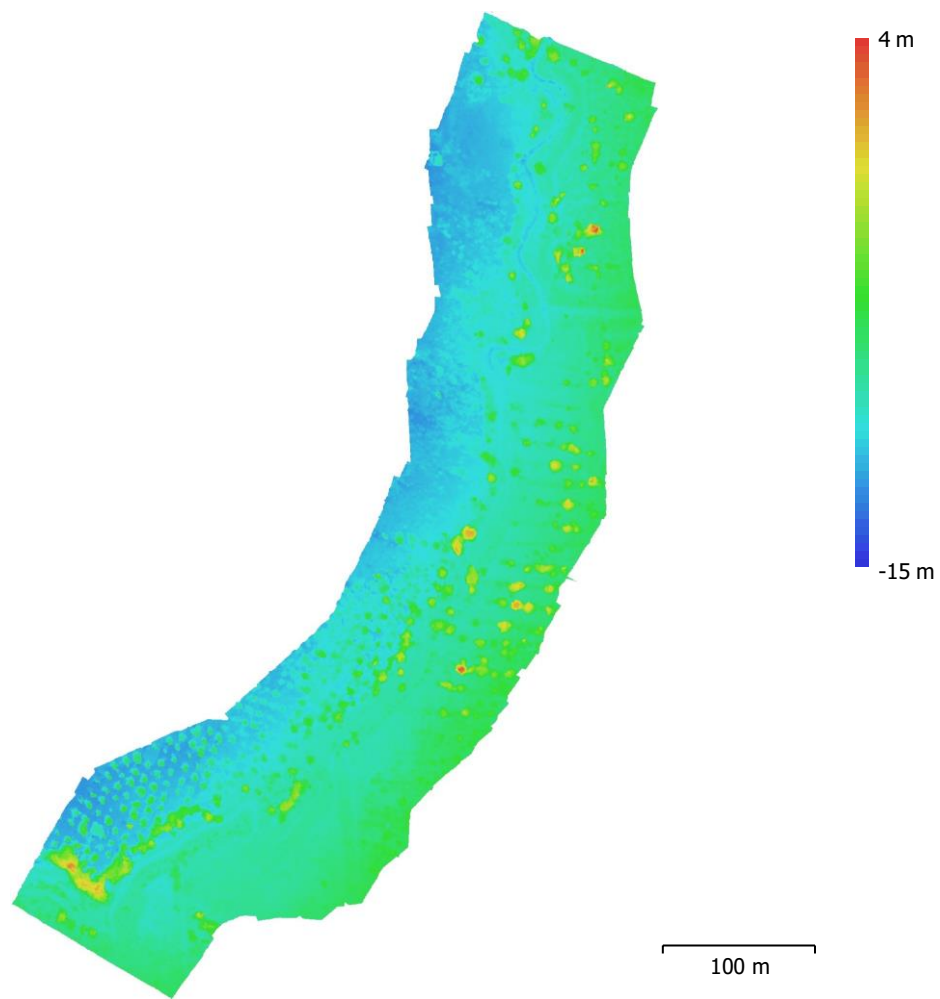


Fig. 4. Reconstructed digital elevation model.

Resolution: 25.5 cm/pix
Point density: 15.4 points/m²

Processing Parameters

General

Cameras	50
Aligned cameras	50
Coordinate system	WGS 84 (EPSG::4326)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	13,586 of 14,703
RMS reprojection error	0.168446 (3.23024 pix)
Max reprojection error	0.508597 (47.523 pix)
Mean key point size	17.5101 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	2.67449

Alignment parameters

Generic preselection	No
Reference preselection	Source
Key point limit	40,000
Key point limit per Mpx	1,000
Tie point limit	4,000
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	No
Matching time	38 seconds
Matching memory usage	120.01 MB
Alignment time	37 seconds
Alignment memory usage	20.55 MB
Date created	2022:06:01 13:47:46
Software version	1.8.4.14408
File size	1.25 MB

Depth Maps

Count	50
Depth maps generation parameters	
Quality	Low
Filtering mode	Mild
Max neighbors	16
Processing time	1 minutes 21 seconds
Memory usage	309.88 MB
Date created	2022:06:01 13:49:51
Software version	1.8.4.14408
File size	19.07 MB

Dense Point Cloud

Points	1,899,721
Point colors	3 bands, uint8
Depth maps generation parameters	
Quality	Low
Filtering mode	Mild
Max neighbors	16
Processing time	1 minutes 21 seconds
Memory usage	309.88 MB

Dense cloud generation parameters	
Processing time	52 seconds
Memory usage	468.47 MB
Date created	2022:06:01 13:50:44
Software version	1.8.4.14408
File size	24.94 MB
Model	
Faces	43,144
Vertices	21,632
Vertex colors	3 bands, uint8
Depth maps generation parameters	
Quality	Low
Filtering mode	Mild
Max neighbors	16
Processing time	1 minutes 21 seconds
Memory usage	309.88 MB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	1 minutes 10 seconds
Memory usage	745.17 MB
Date created	2022:06:01 13:52:04
Software version	1.8.4.14408
File size	1012.13 KB
DEM	
Size	2,986 x 3,872
Coordinate system	WGS 84 (EPSG::4326)
Reconstruction parameters	
Source data	Dense cloud
Interpolation	Enabled
Processing time	13 seconds
Memory usage	125.27 MB
Date created	2022:06:01 13:53:33
Software version	1.8.4.14408
File size	7.72 MB
Orthomosaic	
Size	13,304 x 20,392
Coordinate system	WGS 84 (EPSG::4326)
Colors	3 bands, uint8
Reconstruction parameters	
Blending mode	Mosaic
Surface	DEM
Enable hole filling	Yes
Enable ghosting filter	No
Processing time	5 minutes 29 seconds
Memory usage	934.75 MB
Date created	2022:06:01 13:56:29
Software version	1.8.4.14408
File size	1.04 GB
System	
Software name	Agisoft Metashape Professional
Software version	1 8.4 build 14408
OS	Windows 64 bit
RAM	9.91 GB

CPU
GPU(s)

Intel(R) Core(TM) i3-4005U CPU @ 1.70GHz
GeForce 930M