

# MexicoBeach-10-13-2018 Mission Data

Generated July 12, 2026 at 10:48

Example User — info@crasar.org

**Disclaimer.** Building damage class labels are generated by AI. Consider this when interpreting these labels, and verify all outputs before operational use. This report presents building damage assessment (BDA) results only.

## 1 Survey Summary

|                     |                                     |
|---------------------|-------------------------------------|
| Model               | BDA_UperNet_ScaleMae_CCE_Pretrained |
| Buildings assessed  | 510                                 |
| Orthomosaics        | 10132018-MexicoBeach                |
| Surveyed area       | 4.84 km <sup>2</sup> (1,197 acres)  |
| Ground resolution   | 1.96 cm/pixel                       |
| Coordinate system   | EPSG:32616                          |
| Model run completed | 2026-07-12 15:46 UTC                |
| Capture location    | 29.9477° N, 85.4166° W              |

| Damage class  | Buildings  | Share       |
|---------------|------------|-------------|
| no damage     | 169        | 33%         |
| minor damage  | 59         | 12%         |
| major damage  | 47         | 9%          |
| destroyed     | 207        | 41%         |
| un-classified | 28         | 5%          |
| <b>Total</b>  | <b>510</b> | <b>100%</b> |

### Run provenance

|                    |                                                                                         |
|--------------------|-----------------------------------------------------------------------------------------|
| Model checkpoint   | model.ckpt                                                                              |
| Code version (git) | 6aa700bace18                                                                            |
| Software           | Python 3.11.15, torch 2.1.2+cu121, pytorch-lightning 2.6.5, numpy 1.25.2, xgboost 2.1.1 |
| Run window         | 2026-07-12 15:43 UTC – 2026-07-12 15:46 UTC                                             |

## 2 Capture Location

Approximate capture centroid: 29.9477° N, 85.4166° W. [Open in Google Maps.](#)

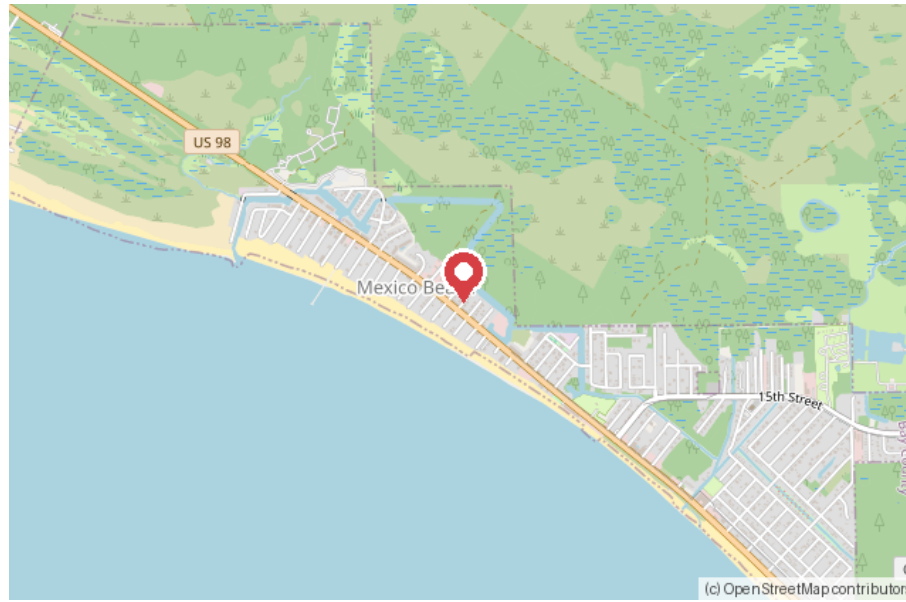


**Figure 1.** Approximate capture location; the marker sits at the survey centroid.

### 3 Orthomosaic Results and Label Distribution

The map below shows the predicted building damage labels in orthomosaic form. Here, **no damage**, **minor damage**, **major damage**, **destroyed**, **un-classified**. The final figure shows the distribution of the predicted labels.



**Figure 2.** Predicted damage labels overlaid on the sUAS imagery.

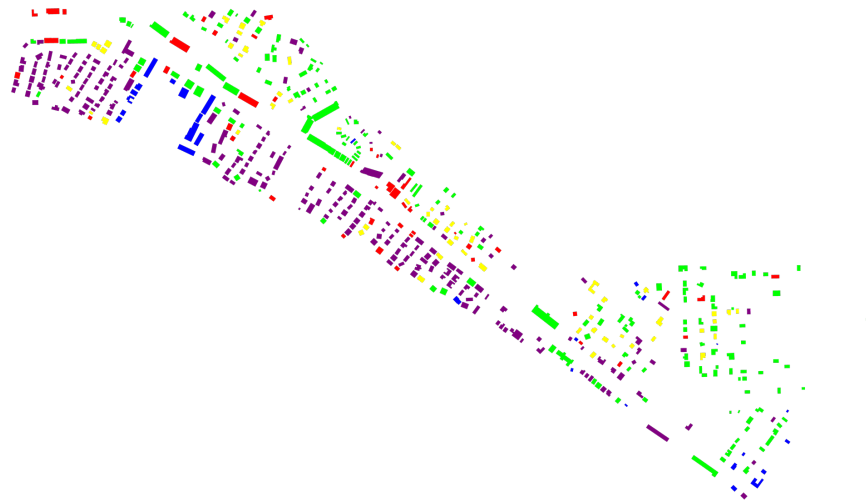


Figure 3. Predicted damage labels.

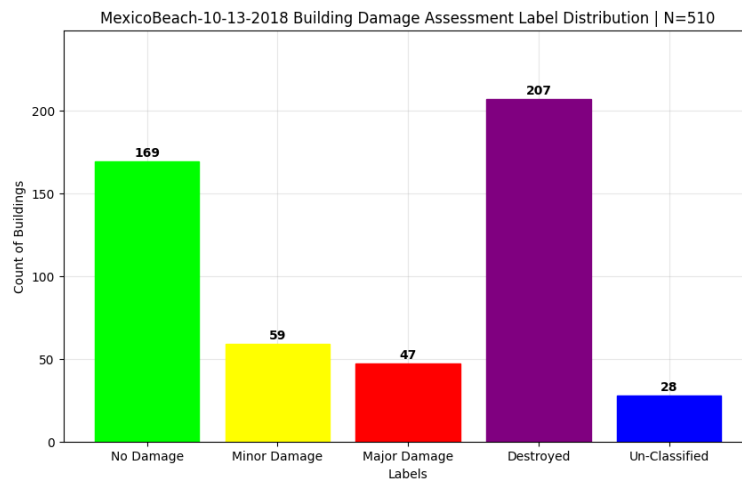


Figure 4. Distribution of predicted labels.

## 4 Model Confidence Map

The map below recolors each building by the model's confidence in its predicted damage label. Blue indicates higher confidence and red lower confidence; treat low-confidence buildings with added caution.



**Figure 5.** Predicted buildings colored by model confidence, overlaid on the sUAS imagery (blue high, red low).

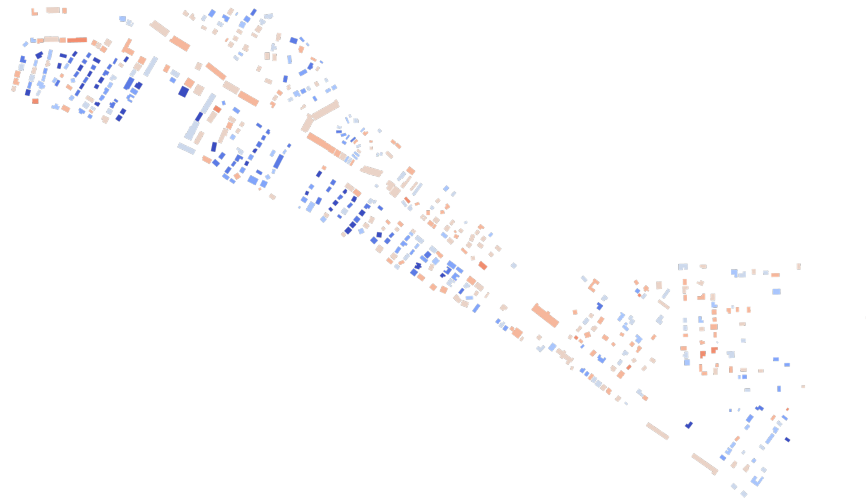


**Figure 6.** Predicted buildings colored by model confidence (blue high, red low).

## 5 Example Buildings

Below are up to four sample buildings for each predicted damage class, to illustrate what each label looks like.



**Figure 7.** Example buildings labeled 'no damage'.



**Figure 8.** Example buildings labeled 'minor damage'.



**Figure 9.** Example buildings labeled 'major damage'.



**Figure 10.** Example buildings labeled 'destroyed'.



**Figure 11.** Example buildings labeled 'un-classified'.

## 6 Confidence Histograms

Below are histograms of the confidences of the label predictions. Each figure is captioned with the associated label.

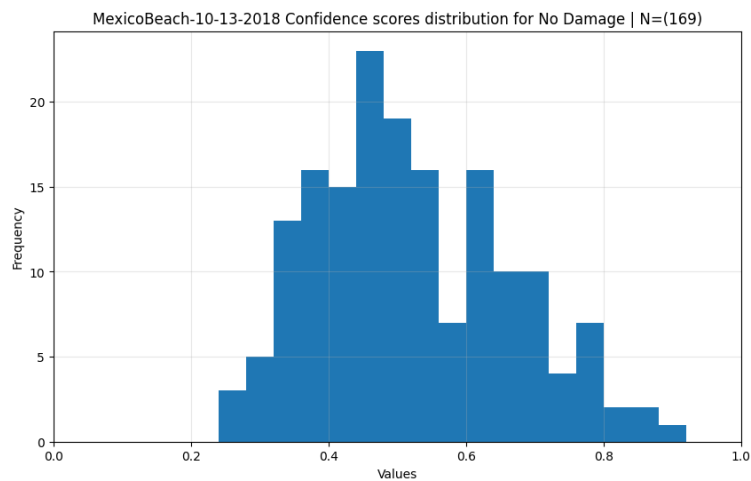


**Figure 12.** Confidence distribution for buildings labeled 'no damage'.

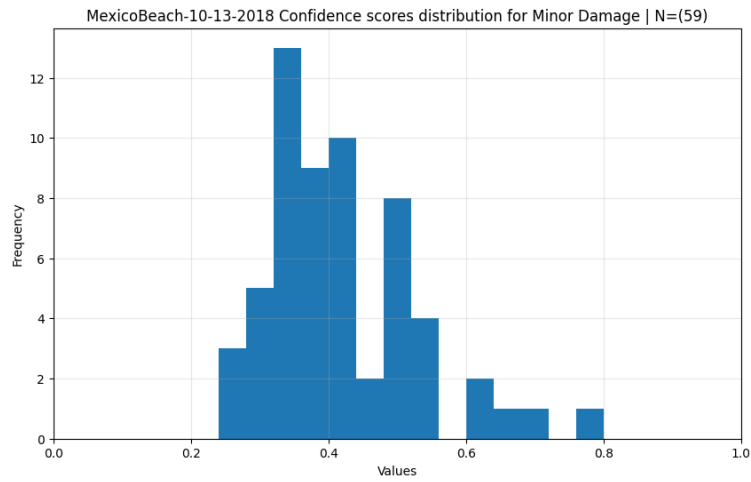


**Figure 13.** Confidence distribution for buildings labeled 'minor damage'.

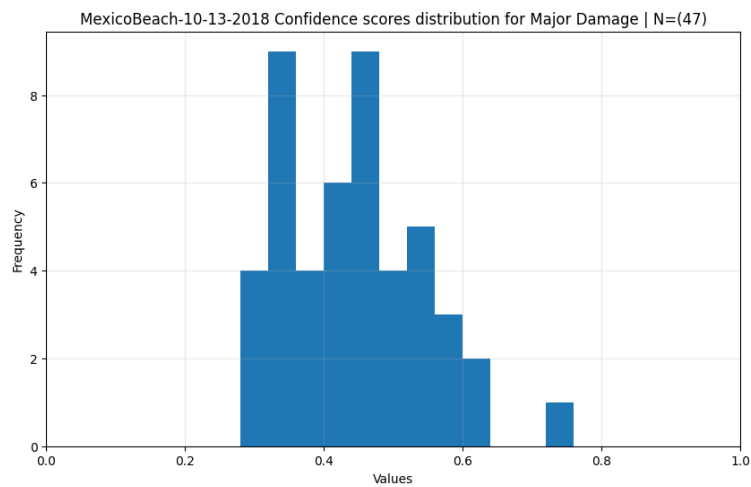


**Figure 14.** Confidence distribution for buildings labeled 'major damage'.

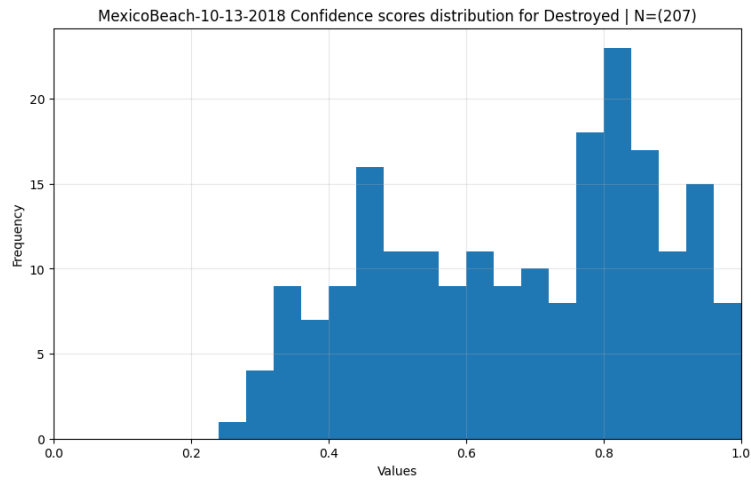


**Figure 15.** Confidence distribution for buildings labeled 'destroyed'.

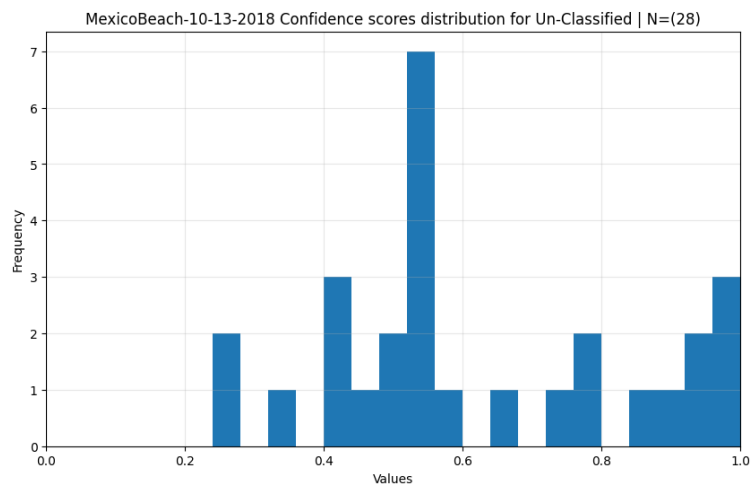


**Figure 16.** Confidence distribution for buildings labeled 'un-classified'.