

Expected Output

1. Clear differentiation between land (brown/green) & Ocean (blue)

Approach

1. Color Space Selection

HSV (Hue, Saturation, Value)

RGB (Red, Blue, Green)

2. Define Color Range

Ocean (Blue)

• HSV for blue $[90, 50, 50]$ to $[130, 255, 255]$

• Land (Brown/Green)

• Brown $[40, 50, 50]$ to $[80, 255, 255]$

• Green $[10, 50, 50]$ to $[20, 255, 255]$

3. Threshold

→ Convert the image to HSV

→ Create masks for blue (ocean) & green/brown (land) using CV2 `inRange()`

2. ★ ⇒ children ⇒ 3

□ ⇒ adults ⇒ 1

△ ⇒ elderly individuals ⇒ 2

Energy score

Red ⇒ Severe ⇒ 3

Yellow ⇒ mild ⇒ 2

Green ⇒ Safe ⇒ 1

Priority order

children ⇒ severe

9 ✓

⇒ mild

6 ✓

⇒ safe

3 ✓

elder ⇒ severe

6 ✓

⇒ mild

4 ✓

⇒ safe

2 ✓

adults

⇒ severe ⇒ 3 ✓

⇒ mild ⇒ 2 ✓

⇒ safe ⇒ 1 ✓

① children ⇒ severe

② elder ⇒ severe

③ children ⇒ mild

④ elder ⇒ mild

⑤ adults ⇒ severe

⑥ children ⇒ safe

⑦ adults ⇒ mild

⑧ elder ⇒ safe

⑨ adults ⇒ safe

1. Colour Segmentation using HSV
2. Detect shape using no. of vertices & shape colour using HSV
3. Calculate distance using centroid of shape.
4. priority score :- shape priority \times emergency priority

$$\text{Actual Score} = \frac{\text{priority score}}{\text{Distance from rescue camp}}$$