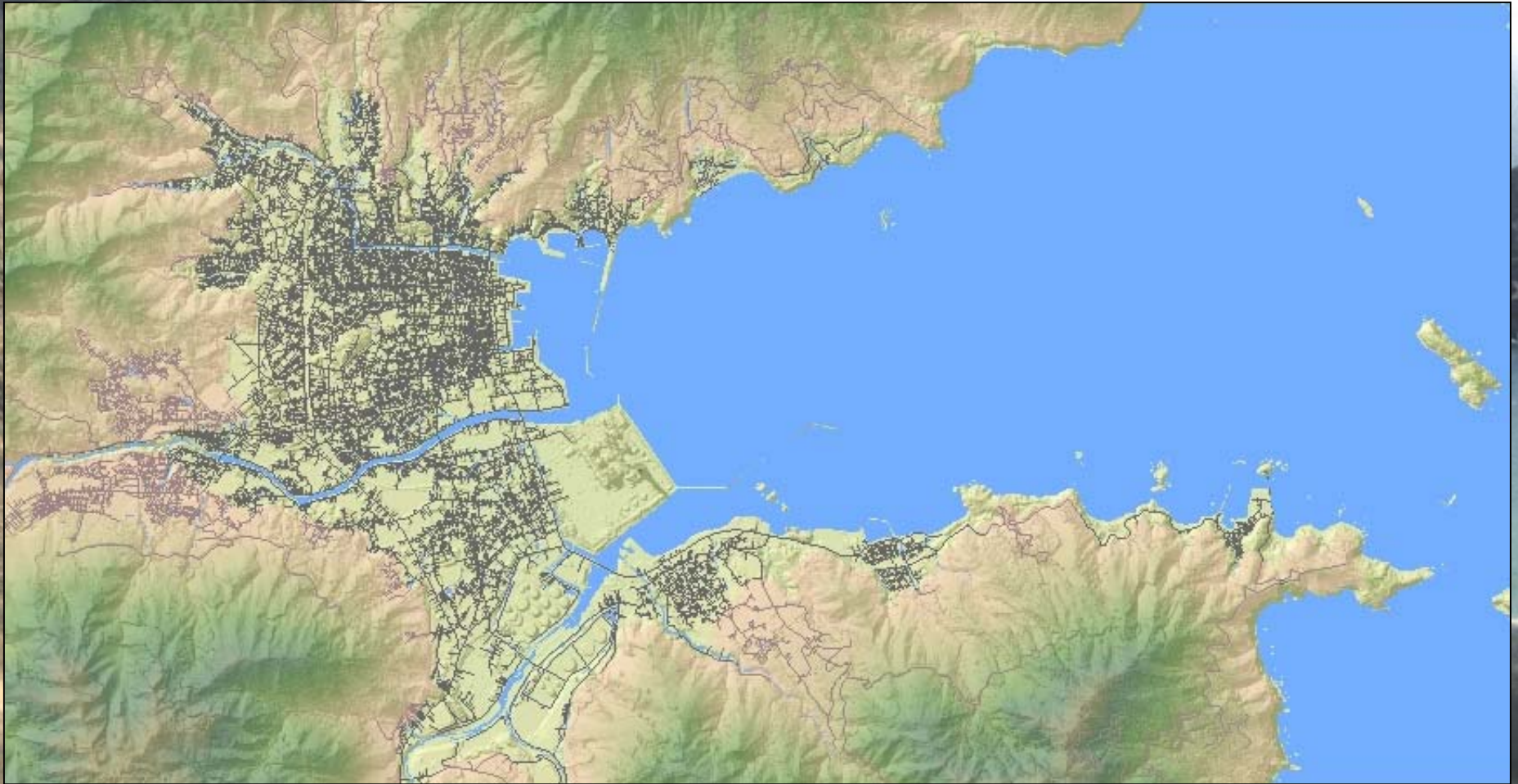


An aerial photograph of a rugged coastline. In the foreground, a wide, sandy beach slopes down towards the water. The ocean is a deep blue-green color, with white waves crashing against the shore. A large, prominent rock formation, known as Cannon Beach Rock, stands in the middle of the ocean. The coastline is characterized by steep, rocky cliffs on both sides. The sky is a pale, hazy blue.

*Some Real Coastal Communities*

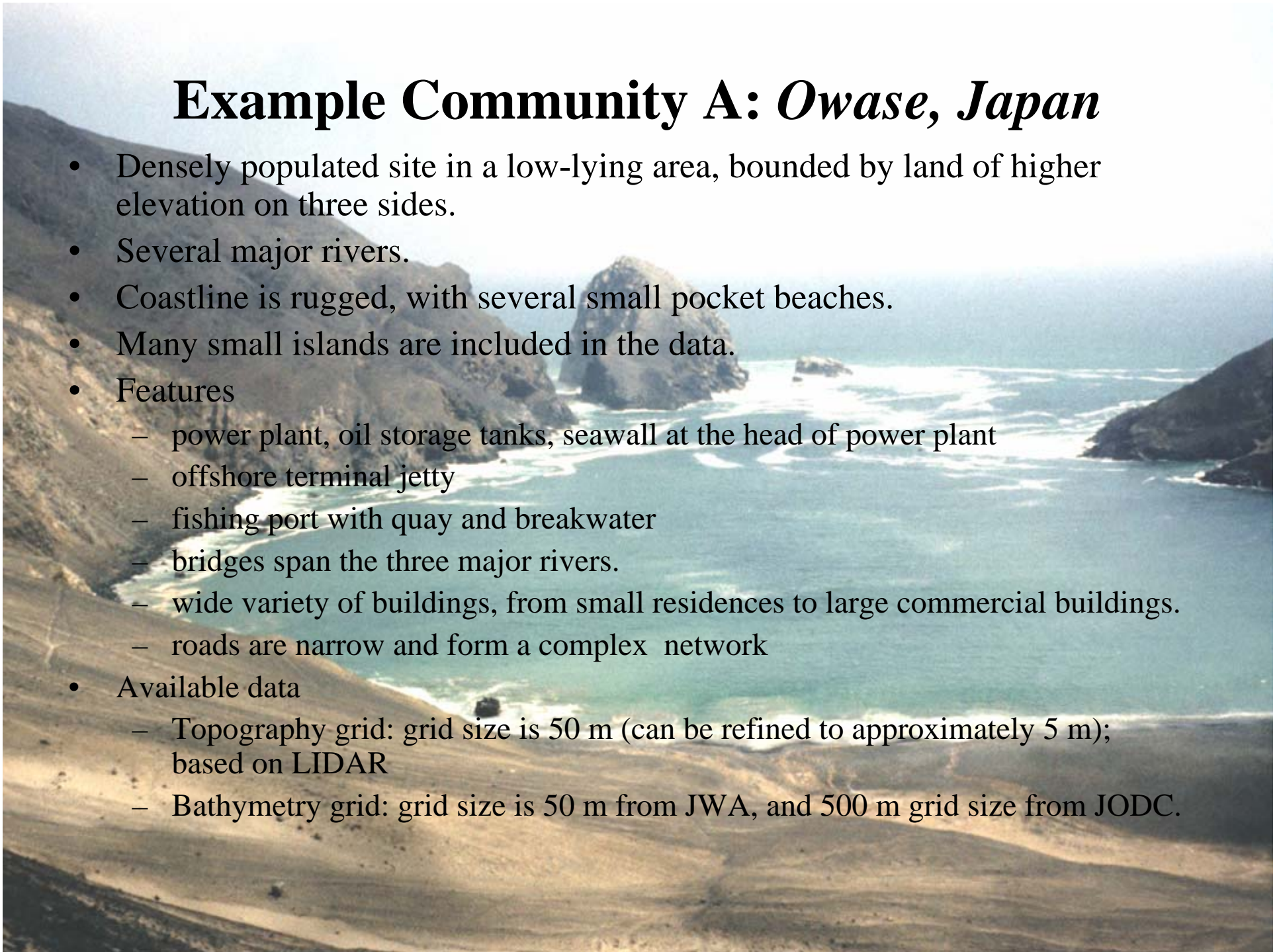
## Example Community A: *Owase, Japan*



Example A, generated using available GIS data; area approximately 8 x 4 km

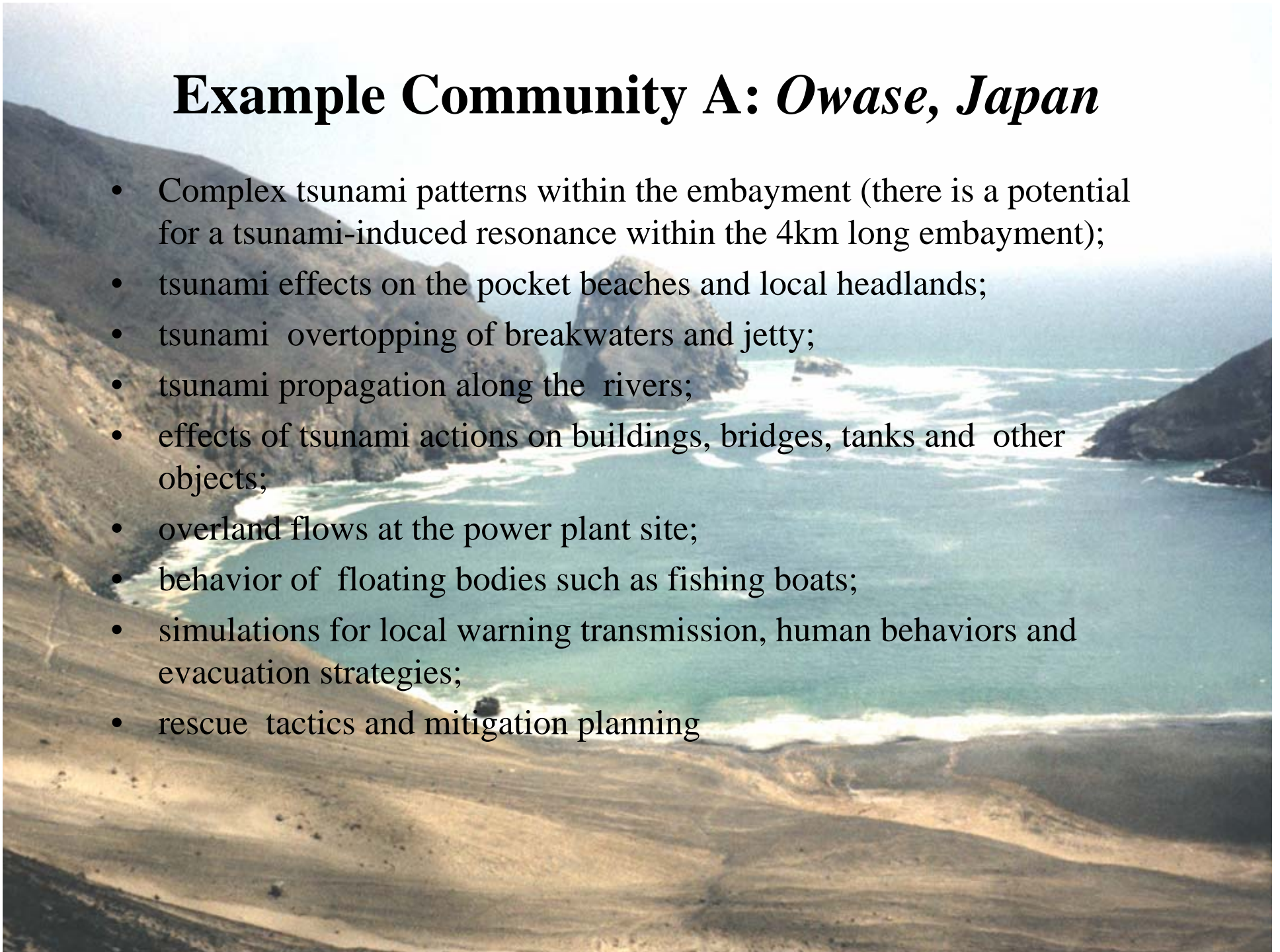
# Example Community A: *Owase, Japan*

- Densely populated site in a low-lying area, bounded by land of higher elevation on three sides.
- Several major rivers.
- Coastline is rugged, with several small pocket beaches.
- Many small islands are included in the data.
- Features
  - power plant, oil storage tanks, seawall at the head of power plant
  - offshore terminal jetty
  - fishing port with quay and breakwater
  - bridges span the three major rivers.
  - wide variety of buildings, from small residences to large commercial buildings.
  - roads are narrow and form a complex network
- Available data
  - Topography grid: grid size is 50 m (can be refined to approximately 5 m); based on LIDAR
  - Bathymetry grid: grid size is 50 m from JWA, and 500 m grid size from JODC.

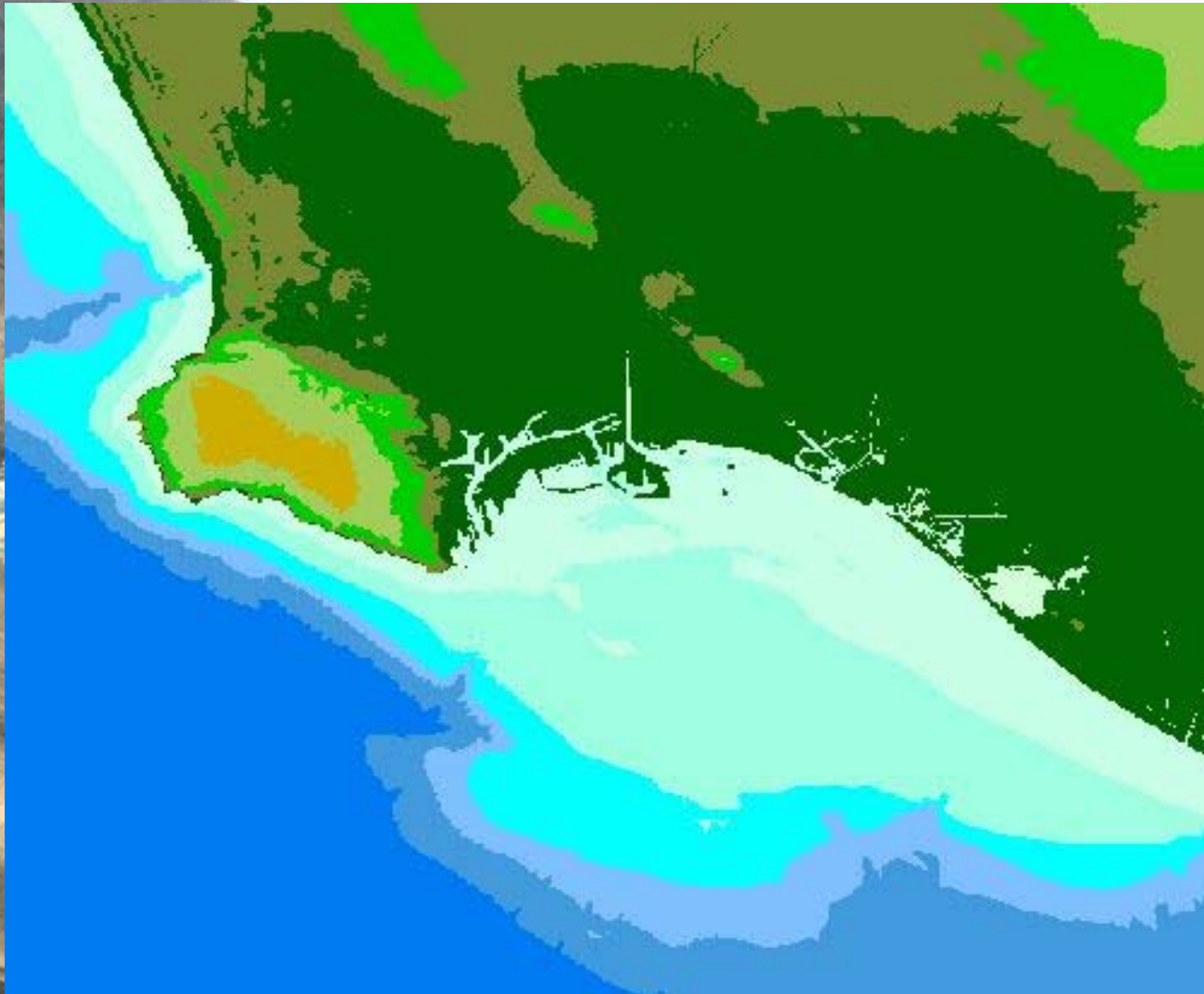


## Example Community A: *Owase, Japan*

- Complex tsunami patterns within the embayment (there is a potential for a tsunami-induced resonance within the 4km long embayment);
- tsunami effects on the pocket beaches and local headlands;
- tsunami overtopping of breakwaters and jetty;
- tsunami propagation along the rivers;
- effects of tsunami actions on buildings, bridges, tanks and other objects;
- overland flows at the power plant site;
- behavior of floating bodies such as fishing boats;
- simulations for local warning transmission, human behaviors and evacuation strategies;
- rescue tactics and mitigation planning

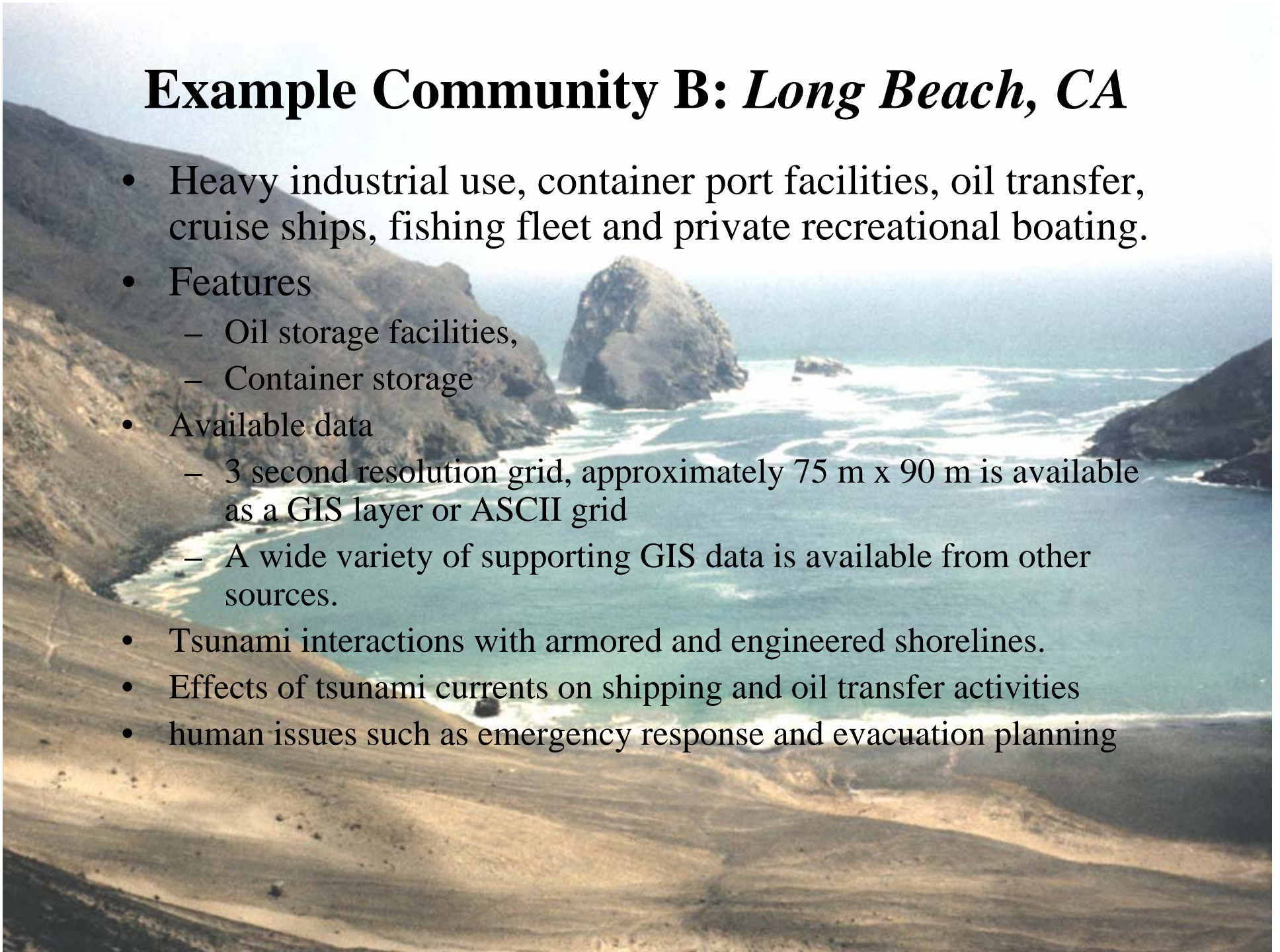


**Example Community B: *Ports of Los Angeles and Long Beach, California***



## Example Community B: *Long Beach, CA*

- Heavy industrial use, container port facilities, oil transfer, cruise ships, fishing fleet and private recreational boating.
- Features
  - Oil storage facilities,
  - Container storage
- Available data
  - 3 second resolution grid, approximately 75 m x 90 m is available as a GIS layer or ASCII grid
  - A wide variety of supporting GIS data is available from other sources.
- Tsunami interactions with armored and engineered shorelines.
- Effects of tsunami currents on shipping and oil transfer activities
- human issues such as emergency response and evacuation planning



**Example Community C:**  
*Long Beach, Washington*

