An underwater photograph showing a large school of blue fish swimming around several large, dark, artificial reef structures. The water is a deep blue, and the scene is brightly lit from above.

Hawaii's Artificial Reefs

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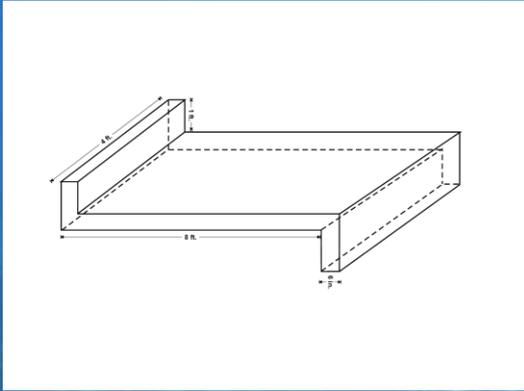
State of Hawaii

Overview of Hawaii's Artificial Reefs-Types

- Fishing Opportunities
- Tourist Attractions
- “Artificial reef” Projects



History of DAR's Artificial Reef Project



- Since 1960
- Locations
- Funding
- Materials



Positives

Enhances habitat
Removes fishing and diving pressure from natural reefs

Negatives

Fish Aggregation Area
Accidents can happen

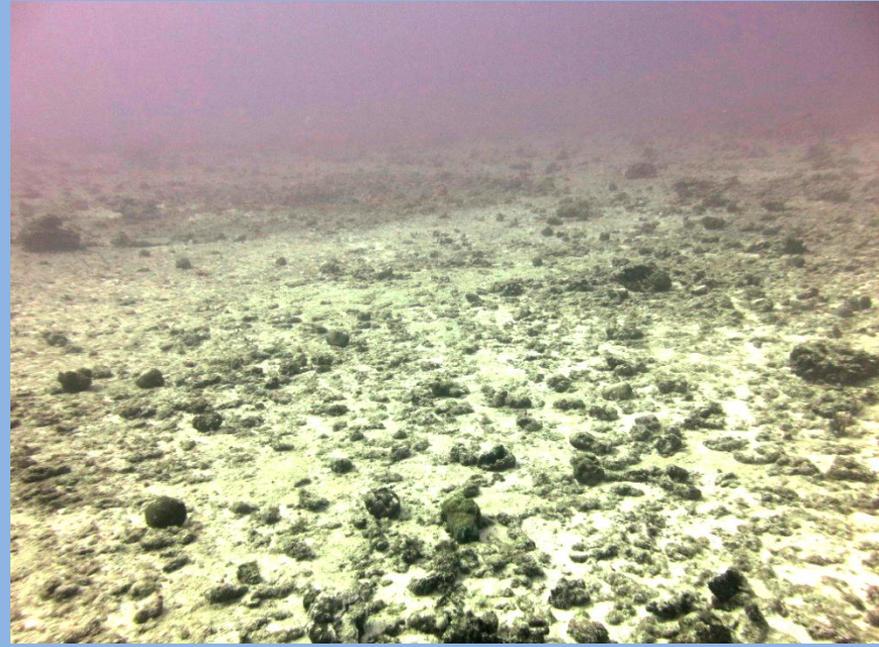
Enhances Habitat

(Example from Maunalua Bay Artificial Reef, Oahu)

Barren limestone/sand area →

Mean fish biomass was 5.4 g/m²

Mean number of species observed was seven



← **Post deployment (2-3 years)**

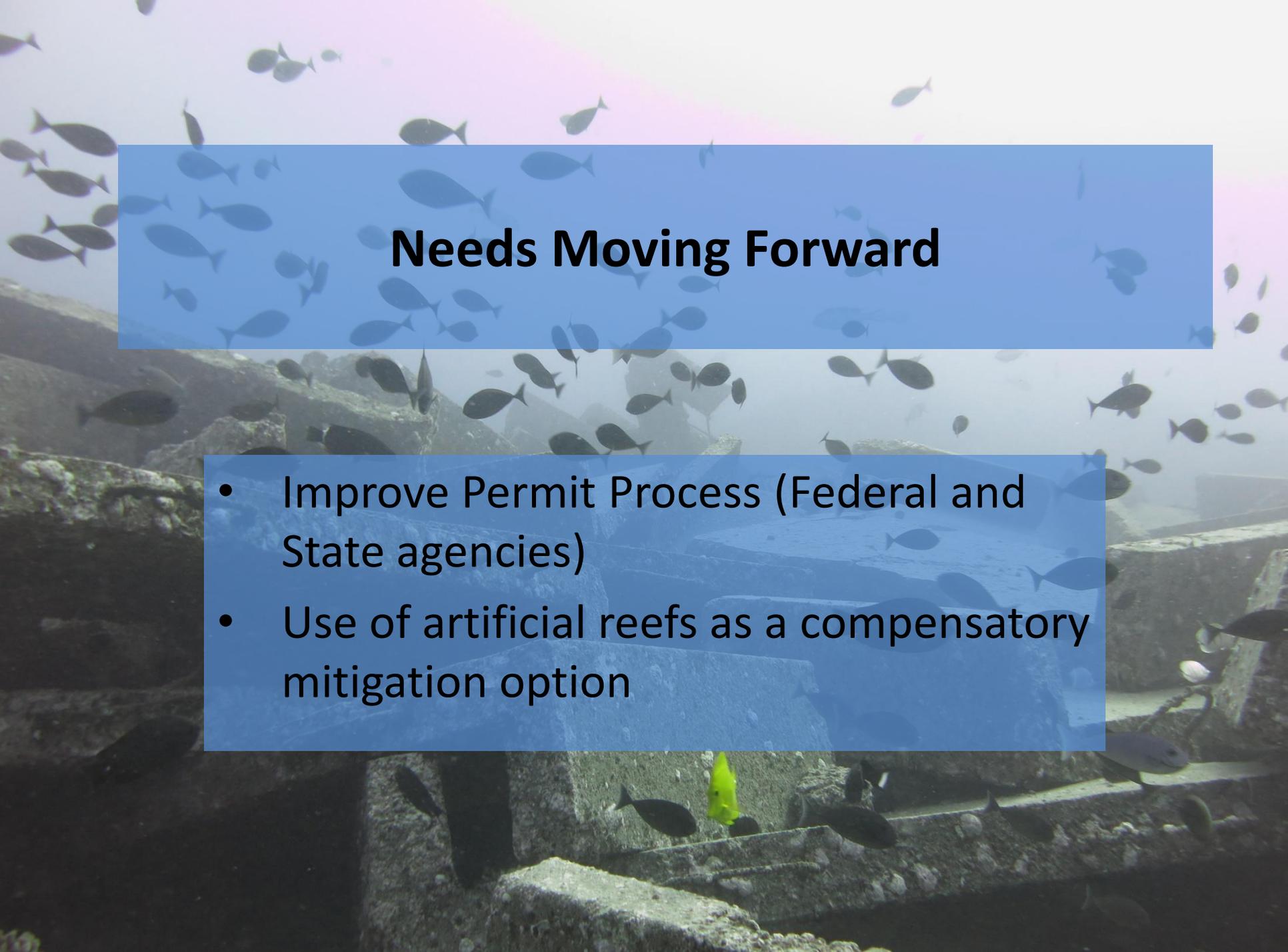
Mean biomass increased 20 fold

Mean number of species went up 5 fold



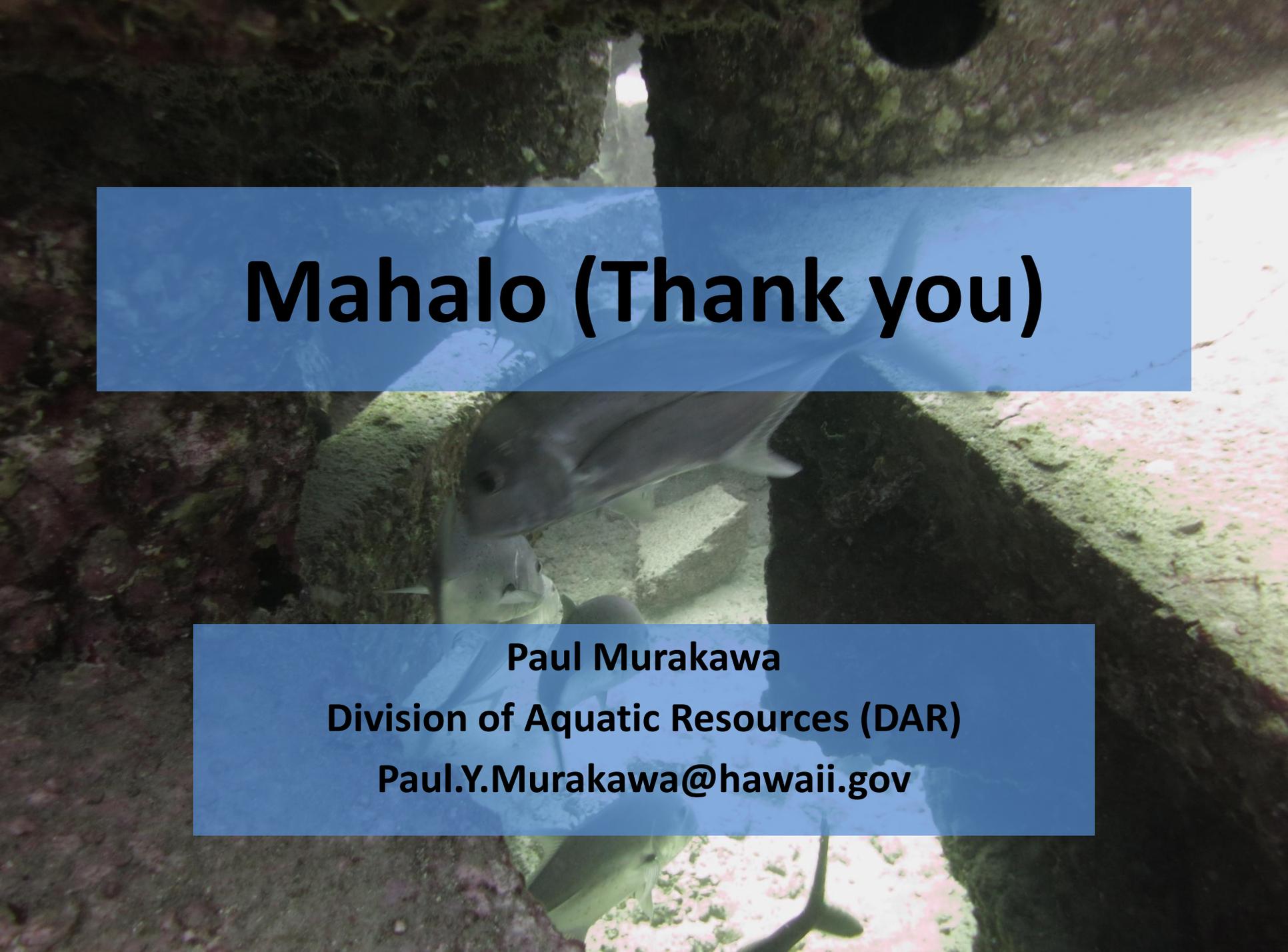
Biggest Challenges and Lessons Learned

- Permitting Process
- Type of material used
- Complete assessment

An underwater photograph showing a large school of small, dark fish swimming around a structure of concrete blocks, which is an artificial reef. The water is clear and blue. A single, bright yellow fish is visible near the bottom center of the frame. The title 'Needs Moving Forward' is overlaid in a blue box at the top.

Needs Moving Forward

- Improve Permit Process (Federal and State agencies)
- Use of artificial reefs as a compensatory mitigation option

An underwater photograph showing several fish swimming near a coral reef. The scene is dimly lit, with light filtering through the water. The fish are silvery and appear to be of various species. The coral is dark and textured.

Mahalo (Thank you)

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