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# UAVs Delivering New Information for Vulnerable Communities

**SFMP trains local researchers to use unmanned aerial vehicles for identifying and mapping coastal communities in the path of floods and erosion.**

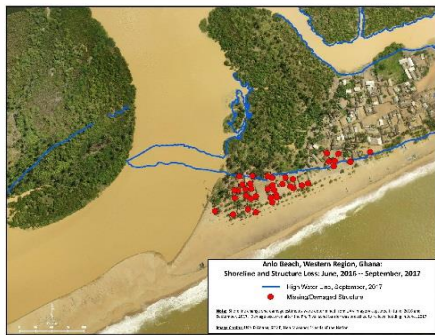


Photo Credit: USAID SFMP

An aerial view of Anlo Beach with analysis that shows the impact of erosion.

**“The rate at which these communities are becoming more vulnerable is alarming”**

**Richard John Jones,  
Western Regional Deputy  
Director, Land Use Authority**

High-wave events are common at Anlo Beach. Recently dozens of homes were washed away, displacing more than 200 residents. “When a similar thing happened to us about 25 years ago, we called for resettlement. But that never materialized”, says John Kennedy, a community elder at Anlo Beach in the Shama District of the Western Region. Located at the mouth of the Pra River, the shoreline along this section of Ghana’s coast is dynamic. According to media reports, more than 500 homes have been destroyed by the sea in the past 30 years. Erosion is a fact of life, stoking fears that entire communities could soon disappear.

“Most communities in the region are facing this situation,” says Richard John Jones, the Western Regional Deputy Director responsible for spatial planning. “The rate at which these places are becoming more vulnerable is alarming.” Dramatic changes to the shoreline are being driven by waves, tides, winds, storms, sea-level change, geomorphic processes, and human activities. Coastal flooding and shoreline erosion is frequently and constantly affecting people, property, and ecosystems.

However, in order for planners and community leaders to create sustainable solutions, more and current information is needed.

The introduction and systematic operation of two Unmanned Aerial Vehicles (UAVs) will meet the need for land-use and land-cover information for 17 districts in the Central Region and 22 districts in the Western Region. This intervention will also address implementation of fisheries management and livelihood activities in fishing communities. “This is a major breakthrough for the country,” says Jones.

Over the last two years, the USAID Sustainable Fisheries Management Project, working closely with the University of Rhode Island’s Environmental Data Center, has been equipping and training Ghanaian researchers at the University of Cape Coast to apply UAV technologies to data collection and community planning. UAVs directly support:

- monitoring and evaluation of coastal ecosystems
- quantification of coastal vulnerabilities
- mapping of fisheries infrastructure
- capturing images that help enhance community resilience and protect coastal livelihoods.

The SFMP UAV program is improving how coastal zones and landscapes are conserved, managed, and utilized. The program provides two UAVs, multiple camera options, and staff training for government, non-government, and university entities. Operators are trained in the safe use of UAVs; as well as processing and analyzing the information collected.

“We are trying to secure a balance where people continue to sustain their livelihoods in a happy and safe environment,” says Christopher Damon, who works on geographic information systems and spatial planning with the Project. High-resolution, UAV imagery is supporting regional development objectives by providing a cost-effective means to inform planners and researchers as they develop sound mitigation measures for the risks that vulnerable coastal communities face.