Pilot offshore automatic abalone farming platform in China

Limited by shrinking nearshore farming space, offshore aquaculture may represent a major future direction for the abalone industry. Despite the large size of the offshore regions, these areas have many challenges, including strong winds and waves and typhoon damage. Several large enterprises have invested in pilot projects, researching and developing new anti-wind and -wave automatic abalone aquaculture platforms (Figure 7) compared to the traditional raft-based system. The equipment adopts the "float box + frame" structure that is suitable for areas where the distance is less than ten nautical miles from land and the water depth is greater than 17 m. Additionally, the raising and sinking of cages are powered by diesel and other appliances using solar or wind power. The structure can withstand typhoons of up to category 12, and the annual output of abalone is expected to be 40 tons. A series of on-site experiments is now conducted to identify the optimal cultivation conditions for this new model.

Figure1 Pilot offshore automatic abalone farming platform (left) and grow-out cages (right).