

# Integrated Offshore Aquaculture for Industrialization in Korea

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Due to the high demand for live fish, Korea already retains an advanced infrastructure for production and transportation for live fish consumption. With its considerable production costs, however, as well as prevalent consumer anxiety relating to environmental pollution and diseases, the conventional (inshore) aquaculture method has been proven to be inefficient from a commercial point of view.

Since the inception of Noah Net Technologies' offshore aquaculture venture in Korea two years ago, great progress has been made in establishing a business model to implement the offshore aquaculture technology in the aquaculture industry. For starters, the technology has proven to be very effective for withstanding typhoons and red tides, yet there are many aspects that still need improvement to successfully implement offshore aquaculture technology. The following are all issues that need to be addressed for such success:

- Improve the auto-feeding and mooring systems to withstand rough sea conditions and harvesting and logistic technology for live fish.
- Develop a cage that will submerge to a depth that is more ecologically stable. It would also be helpful to be able to increase the size and capacity of the cage.
- Develop a technology and species to polyculture by using thermocline for a double layer cage that submerges 10-30 m.
- Develop a comprehensive real time monitoring technology that will integrate monitoring of fish and their environment.
- Develop a feed technology that will be highly effective against diseases and that will increase the immune system of the fish against various diseases.

Through collaboration with other research labs, Noah Net Technologies would like to determine an appropriate feed formula for its offshore site based on its biomass. The company is also seeking useful industrial data relating to the above mentioned issues with cages, offshore equipment manufacturers, and ocean engineering companies to develop more productive operations.