

## Fukushima Daiichi Nuclear Power Station Progress in the marine organisms rearing test (Start of rearing practice in the mockup tanks)

<Reference Material>

July 21, 2022

TEPCO Holdings

Fukushima Daiichi D&D Engineering Company

- In order to alleviate people's concerns and to cultivate peace of mind, we will rear marine organism in tanks of seawater containing ALPS treated water and compare them with organism reared in normal seawater and report the results carefully in an easy-to-understand manner. Based on the results of many studies domestic and abroad on the behavior of tritium, data for this test will first be gathered for 6 months to show that "tritium is not concentrated in the living bodies and that the concentration of tritium in live bodies do not exceed that of the rearing environment" as demonstrated in past tests results.
- We plan to start marine organism rearing test in seawater and in seawater containing ALPS treated water around September 2022. Before starting the rearing tests, we have started practicing rearing flounder in seawater found around the station in March to learn how to rear marine organisms and to verify equipment design.
- In practicing rearing with the experienced flatfish breeder within this company and technical help of external experts, we have been routinely managing tanks and water quality and checking on the growth of flounder, and have been able to train in-house staff in flounder rearing. Having also experienced parasites-related deaths and deaths due to the difference of salinity in salt baths<sup>※</sup> to eliminate parasites, we have also decided to make improvements in the operation.
- In rearing practice that we will be starting in the mockup tanks in late July, in addition to flounder, abalone and seaweed will also be reared in these mockup tanks while we will equip each tank with a UV sterilizer to prevent the spread of parasites to each tanks, and the new flounder will be bathed in salt water before they will be transferred to tanks, all flounder will be periodically tested for parasites to prevent new flounder from bringing in parasites into the tanks. The actual rearing tests on schedule to start in September as planned as the design of the mockup tanks will be used for the actual rearing test tanks, and the bacteria is being grown in separate tanks.

[< Announced as of July 14, 2022 >](#)

※Salt bath: A way to eliminate parasites in fish by using the difference in salinity in seawater and osmotic pressure in the parasite's body.

- On July 20, we completed to trans flounder and abalone to the mockup tanks, started rearing practice of these in the mockup tanks on July 21. We are preparing towards collecting seaweed, and rearing practice of seaweed in the mockup tanks will commence as soon as seaweed have been collected.

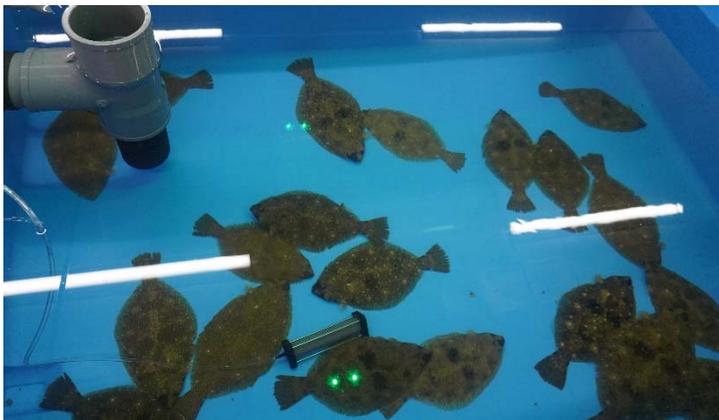
# Rearing practice in the mockup tanks



① Overall view of mockup tanks



④ Tanks for seaweed



② Flounders

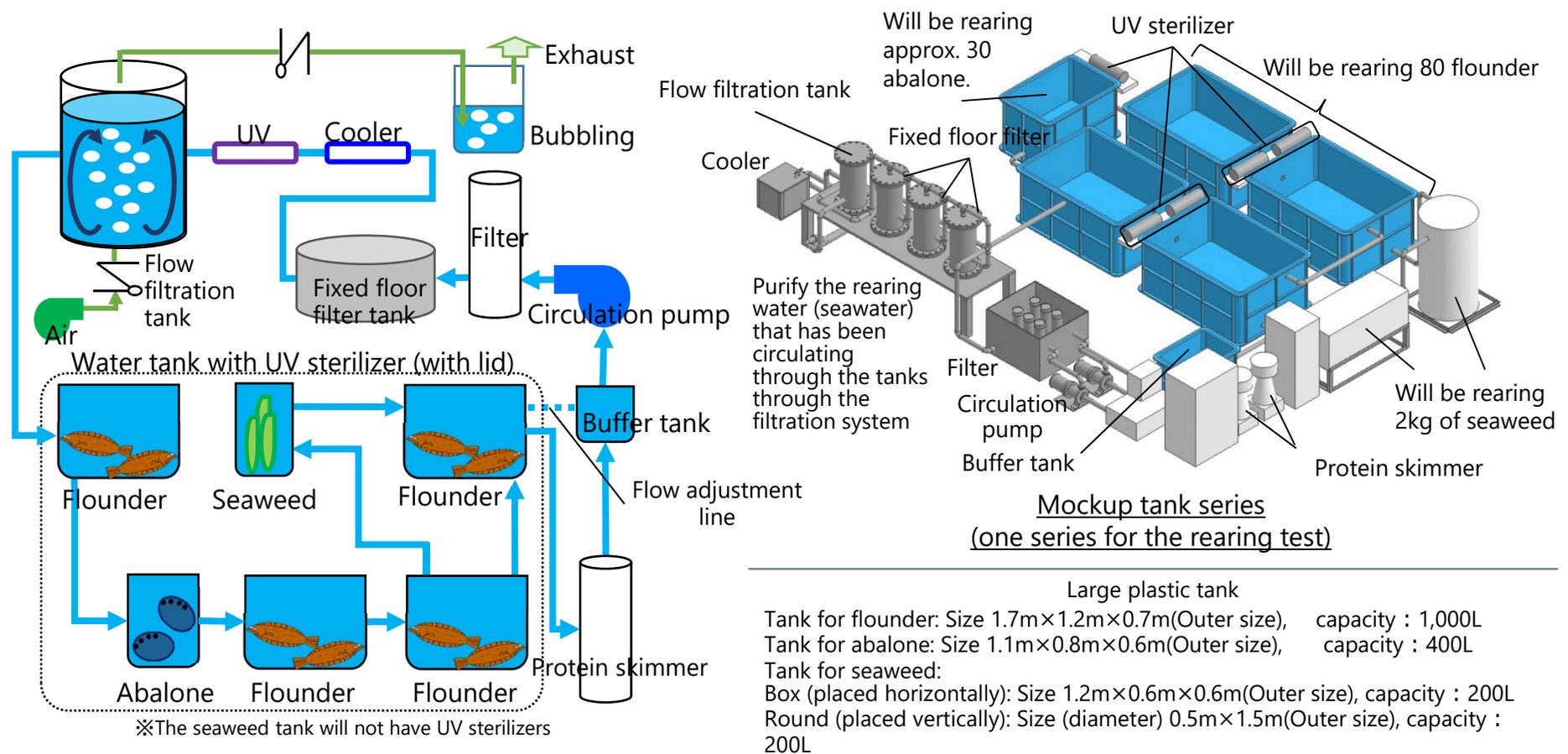


③ Abalones

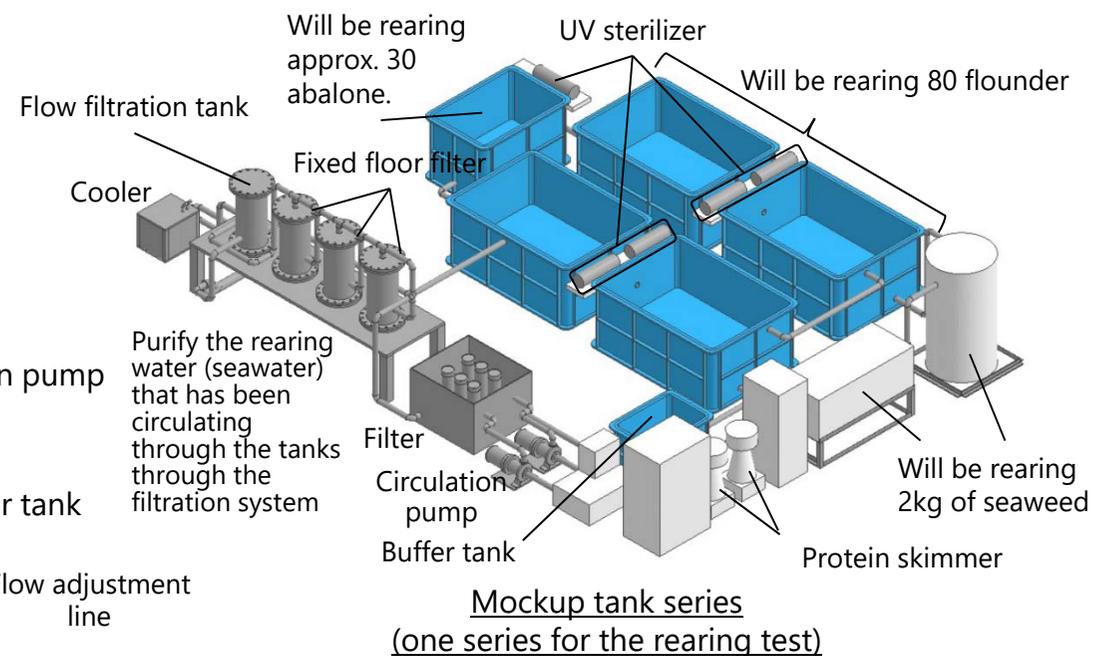
**【Reference】 Using the knowhow and experience, and expanding the number of species reared (Preparation ①-2 Mockup tank)**



- While the initial design had one UV sterilizer per series of mockup tanks, the design was updated to accommodate the need to eliminate and reduce parasites. Each tank will be equipped with one UV sterilizer to prevent parasites and their eggs from spreading to other tanks.



Mockup tank series  
(one series for the rearing test)



Mockup tank series  
(one series for the rearing test)

Large plastic tank	
Tank for flounder: Size 1.7m×1.2m×0.7m(Outer size),	capacity : 1,000L
Tank for abalone: Size 1.1m×0.8m×0.6m(Outer size),	capacity : 400L
Tank for seaweed:	
Box (placed horizontally): Size 1.2m×0.6m×0.6m(Outer size),	capacity : 200L
Round (placed vertically): Size (diameter) 0.5m×1.5m(Outer size),	capacity : 200L

※The actual size and capacity of the tank may be different