Nutrialgae – Novel sustainable algae-based fertilizers by Ficosterra

The widespread use of chemical fertilizers in agriculture has created a global pollution challenge with much of the nitrogen and phosphorus escaping into waterways and the ocean, creating coastal 'dead zones', including in places like Morocco and Mexico. Hence its continuous use without taking any remedial measure to reduce or judicious use will deplete the marine and aquatic ecosystems.

With support from the OIC, Ficosterra is demonstrating how sustainably harvested seaweed can be used to produce organic fertilizer that reduces nutrient pollution, improves crop yields, and saves farmers money. The company started the implementation of the two demonstration projects in March 2021, one in Mexico and one in Morocco. These two demonstration projects were fully implemented by July 2022 where the company is planning to conduct a final workshop in November 2022 to present the main outcomes of these two demonstration projects and its future plan for sustainability and upscaling their services.

Based on the results obtained from applying the Ficosterra product on two pilot areas in Mexico and in Morocco, there are a significant reduction in the level of nitrogen (N) and Phosphorus (P2O5) with a reduction of 20% and 34% of the average concentrations of both (N) and (P2O5) respectively. The research team estimated the environmental impact from an agriculture area of 2000,000 Ha using the new Ficosterra algae-based fertilizer will be reducing the amount of Nitrogen (N) released to the environment from this agricultural area by 104,800 Ton and reduction of P2O5 with 115,600 ton. In top of that, the annual crop production from the same area can increase up to 20% when using Ficosterra products. This reduction will reduce the risk of water eutrophication from agriculture drainage water.

Ficosterra will upscale the innovation by providing technology transfer services to coastal communities willing to benefit from marine seaweed to produce sustainable fertilizers and feedstock that will create wealth and employment. The company prepared a scale-up plan targeting countries in Middle East, Europe, and North America during the period 2022-2026, then targeting Africa, Asia, and South America from 2026 and onwards.