



Tropentag, September 9-11, 2020, virtual conference

“Food and nutrition security and its resilience  
to global crises”

## The World's Oceans Are Future Hope for the Feeding of the Developing World in an Era of Global Climate Change

MAGDY MOHAMED NIAZY

*Agric. Res. Cent. (ARC), Egypt*

### Abstract

According to population projections from both the United Nations and the U.S. Census Bureau, by 2050 our planet will have some 9 billion human inhabitants. This equates to an expansion of the human presence on Earth by nearly half (48 %) over the first 50 years of the 21st century. Products designated as food for humans and domestic animals will have to more than double for the whole world. Fish and plant production from the sea an important food source for many across the globe. However, food production from the sea may be advantageous from a climate change perspective. First, because their production occurs in the ocean, capture and mariculture production do not directly drive land conversion like land-based food systems (e.g. conversion from forests to farms and areas for raising livestock). Second, for many marine species, the greenhouse gas emissions associated with their production are comparatively low. A recent study indicates that greenhouse gas emissions per portion of protein associated with the production of large pelagic, small pelagic and white fish capture fisheries, as well as the production of molluscs and salmon in mariculture, are lower compared to terrestrial animal production. Therefore, The Seaweed will be the ideal alternative to solve the food shortage (hunger) in the developing world, also the seaweed is rich in minerals that a human needs where there was a shortage of these important minerals as a result of climate change. Shifting to restorative ocean farming could provide good jobs for coastal communities, and support healthy plant and shellfish-based diets that have an incredibly low carbon footprint. In only 5 months, 4,000 square meters of ocean can produce 25 tons of seaweed and 250,000 shellfish per acre. With the proper distribution network, a series of small farms, collectively the dimensions of Washington State could feed the earth.

**Keywords:** Global Climate Change, oceans, seaweed, shellfish, developing world