Green technology based fast algae cultivation and algae consumption projection

Mir Shariful Islam

International Institute for Carbon-Neutral Energy Research (I2CNER), Mechanical Engineering Department, Kyushu University, Fukuoka, Japan

The rapid growth of industrialization is becoming a severe threat to the environment by releasing tons of flue gasses and solid wastes. One of the significant flue gasses is carbon dioxide (CO_2), which is considered a primary cause of global warming. To mitigate the effect of CO_2 in the environment, it is essential to capture it and find a way to utilize it in various applications. One of the promising applications of captured CO_2 is in the fast cultivation of algae. These algae can be used in pharmaceutical sectors, food and feed industry, and biofuel production. This research focuses on finding the optimum and efficient solution of fast algae production utilizing captured CO_2. Moreover, from September 2019 to March 2020, a survey was conducted online (social media) and face-to-face interviews among Bangladeshi adults. Our survey suggests that Bangladeshi people are ready to consume algae-based food products.

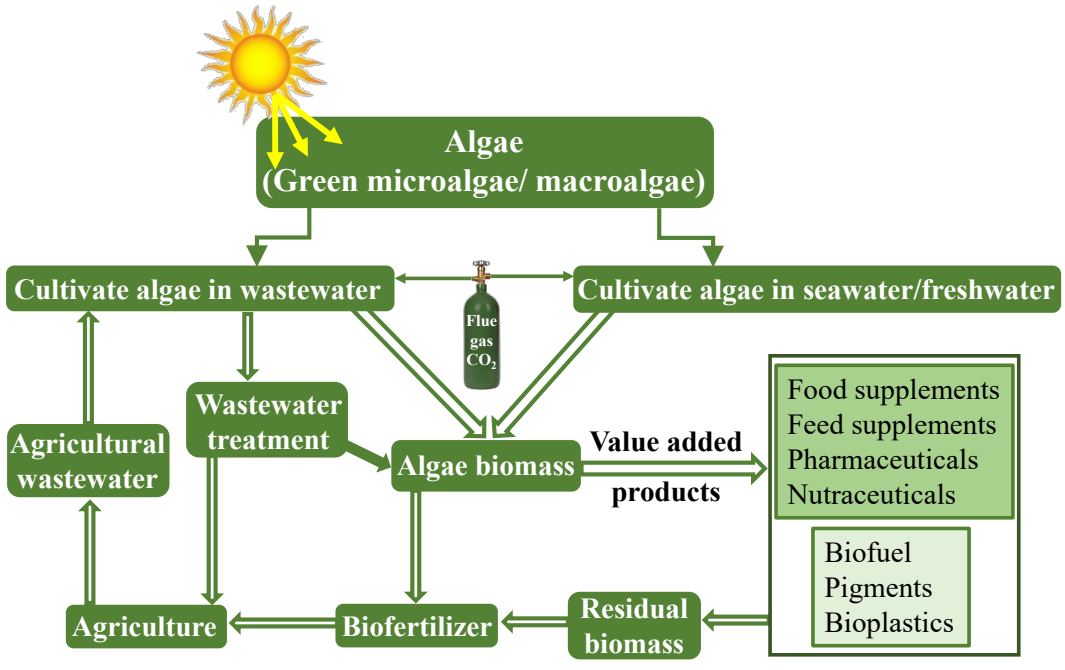

Figure: Conceptual diagram of algae cultivation and utilization.