

# **Utilization of Underutilized Fishery Resources for the Production of Value-Added Fishery Products**

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## **Abstract**

Sri Lanka depends, to a great extent, upon the living aquatic resources from the seas and backwaters for animal protein. Since the per capita consumption of fish is only 17.8 kg, the annual fish production of around 254 680 tons of finfish and crustaceans is insufficient to meet the protein requirement of the population. Therefore, initiatives for development of the effective technology for the utilisation and transformation of marine resources to economically viable, value added fishery products other than the consumption of fresh fish are required.

Recently, research and development activities have been under taken to evaluate aspects related to improvement of the shelf life, nutritional and the sensory qualities, and also the safety of the traditional, cured, marinated and the fermented fish products using bio-preservatives. Application of new packaging techniques to Sri Lankan recipes would presumably ensure their existence in the industry. As such there has been a growing interest on utilisation of low valued and under-utilised fishery products, evaluation and comparison of their nutritional properties, therapeutic values and the health benefits.

In the next step the focus has been on the utilisation of the by – catch of the shrimp trawl fishery comprised of a number of low valued fish for innovation of functional food. The existing marketing trends also motivate the production of meat gel type products. The enhancement of gel forming ability, setting and disintegration properties of these fish species to develop surami based food such as paste sausages, noodles, soup, etc., have already been successfully experimented. This was made using high valued aquatic products.

There is also a growing potential in the seaweed processing industry with preparation of a number of attractive products. A few seaweed varieties with the potential to be utilised for extraction of agar and agrophytes are grown in certain backwater lagoons and shallow seas off Sri Lanka. Though the recent research and development initiatives suggested effective methodologies for agar extraction from seaweed and preparation of the products such as deserts, gel drops etc., the current focus has been on the quality evaluation of local agrophytes and agar for industrial venture targeting export market.

In addition there is also a great scope for the fishmeal and aquaculture feed manufacturing industry using fish waste as the protein source. The natural biopolymers such as chitin and chitosan have already proved their ability in terms of purification of heavy metals from the industrial effluents. Therefore, it is emphasised that initiatives to formulate proper methodologies, handling and processing techniques in order to improve the efficacy of the existing technology for development and the enhancement of the food processing industry is required.