

# Quantitative survey of *Sargassum* along the south-west coast of Ceylon

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*Sargassum* is a brown seaweed from which alginic acid is extracted. A survey was carried out off the south-west coast of Ceylon in December 1963, and January 1964, with the view to determining the quantity of *Sargassum* available. For this survey points were selected at 50 meters intervals along the coast where *Sargassum* was present. At each point a rope was extended into the sea at right angles to the coast. Buoys were attached along the rope at intervals of 25 meters for the first 100 meters; for the next hundred meters at intervals of 50 meters and for the next 200 meters at intervals of 100 meters.

In shallow places it was possible to wade into the sea, while to get to deeper areas an oru (a canoe) was used. At the point of attachment of each buoy, a 0.5 meter square metal frame was dropped into the sea and all the algae enclosed within the frame were collected by a diver. The weight (wet) of *Sargassum* species collected were determined and the names of other algae present were noted. The depth was measured. The nature of the substratum was also noted. The data collected at the various places and the quantity of *Sargassum* available in each area are furnished in Tables I-VIII\*. The quantity of *Sargassum* available at each station was calculated by the Statistical Officer of the Department of Fisheries from the given data.

The total quantity of *Sargassum* available in the south-western coast was 775 tons (wet weight). The dry weight will be one-sixth of this quantity, i.e. 129 tons.

## CONCLUSION

- (1) *Sargassum* along the south west coast grows mostly on dead coral reefs which are exposed to waves at low tide.
- (2) The dominant species of *Sargassum* in this region is *Sargassum cervicone* Greville.
- (3) Mature receptacles of *Sargassum cervicone* were observed in December and January.
- (4) About 129 tons of dry *Sargassum* can be harvested along the south-west coast from Ambalangoda to Hambantota.
- (5) The best period of harvesting is in December.

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Note by Editor: Tables I-VIII are available for reference at the Library, Fisheries Research Station, Colombo 3.

## REFERENCE

- GILMARTIN, M. 1960 The ecological distribution of the deep water algae of Eniwetok Atoll. *Ecology*. 41 (1): 210-221.  
 GILMARTIN, M. 1960 The ecological distribution of the deep water algae of Eniwetok Atoll. *Ecology*. 41 (1): 210-221.  
 SOUTHWARD, A. J. & ORTON, J. H. 1954 The effect of wave action on the distribution and number of the common plants and animals living on the Plymouth breakwater. *J. Mar. Biol. Ass., U. K.* 33 (1): 1-19.  
 YOSHIDA, T., SAWADA, T., & HIGAKI, M. 1963 *Sargassum* vegetation growing in the sea around Tsuyazaki, North Kyushu, Japan. *Pac. Sci.* 17 (2): 135-144.  
 WALKER, F. T. 1947 Sublittoral seaweeds survey, *J. Ecol.* 35 (1-2): 166-185.

## SUMMARY OF DATA FROM TABLES I—VIII

Places	Distance from Shore in Meters	Area of Estimation in square meters	Estimated Weight in Kg. per sq. m.	Estimated Weight in Kg.	Estimated Weight in Tons
1. Ambalangoda ..	—	—	—	—	Too small for Estimation
2. Hikkaduwa ..	1. ( 0—50)	32,500	3.87	125,760	124
	2. ( 50—100)	32,500	2.82	91,650	90
	3. (100—400)	195,000	0.55	107,250	105
3. Galle ..	1. ( 0—50)	2,500	9.44	23,600	23
	2. ( 50—100)	—	—	—	—
	3. ( >—100)	—	—	—	—
4. Dalwatta and Unawatuna ..	1. ( 0—50)	7,500	7.96	—	—
	2. ( 50—100)	7,500	0.40	59,000	59
	3. ( >—100)	—	—	3,000	3
5. Habaraduwa ..	1. ( 0—50)	7,500	8.48	63,600	62
	2. ( 50—100)	—	—	—	—
	3. ( — )	—	—	—	—
6. Koggala ..	1. ( 0—50)	25,000	6.52	162,900	160
	2. ( 50—100)	25,000	0.92	23,000	23
	3. ( >—100)	—	—	—	—
7. Arangawala ..	1. ( 0—50)	10,000	6.20	62,000	61
	2. ( 50—100)	10,000	0.56	5,600	6
	3. ( >—100)	—	—	—	—
8. Hambantota ..	1. ( 0—50)	12,500	4.77	59,625	59
	2. ( 50—100)	—	—	—	—
	3. ( — )	—	—	—	—