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Annual Report of the Department of Fisheries for the Year 1946-47

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# ANNUAL REPORT OF THE DEPARTMENT OF FISHERIES, BOMBAY PROVINCE, FOR THE YEAR 1946-47.

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CHAPTER I.

MARINE FISHERIES.

The fishing season started, as usual, early in September, but there was an unexpected setback in October and November—months of bumper catches—when unseasonal rain fell. There was thus, an abnormal dearth of pomfrets in the City of Bombay, which is, otherwise, at this time of the year well supplied with this variety of fish.

2. **Launches and equipment.**—The number of launches in operation during the year was 29, as compared with 17 in the previous year. The increase was rendered possible on account of the construction of launches for which orders had been placed by Messrs. A. R. Bhat, Sultania Trading Agency and this department. Eight motor vessels surplus to the requirements of the Navy, owing to the cessation of hostilities, were acquired by private traders.

In addition, 3 other hulls ordered privately, were under construction. One of these will be equipped with a 6-cylinder Gray marine diesel engine allotted by this department. Engines for the other 2 vessels have been obtained by their owners from the open market.

The most noteworthy event of the year was the entry of the fishermen into the ranks of launch owners. These fishermen, belonging to Bingi, near Karwar, formerly disposed of their catch to launch owners, but now they market their catch themselves. For this purpose they have formed themselves into a Co-operative Society and purchased a 72 footer motor launch fitted with twin Gray marine diesel engine, each developing 250 B.H.P. This vessel was bought for Rs. 40,000 and is expressly meant to transport to Bombay the fish caught by its members. Thus, the fishermen secured for themselves the profit that would, otherwise, have gone to parties who are not fishermen, but merely trade in fish. This venture, which has seized the imagination of other fishermen elsewhere on the coast, has been made possible by the grant of a loan of Rs. 40,000, by Government. Out of this amount Rs. 10,000, have been treated as subsidy and the balance as a loan recoverable in easy instalments at 3½ per cent. interest.

The spare parts of the 12 Gray marine diesel engines, ordered out by the department in the previous year arrived during the period under review. The arrival of the spare parts was welcomed by the launch owners, who had been experiencing great difficulty till then in effecting repairs to their engines.

3. **Capitalist's interest.**—The progress of our fisheries in recent years has been due, in no small measure, to the entry of capitalists in the fish trade. Their enterprise has kindled the minds of our fishermen, who, but for them would still have been employing their age-worn methods.

The formation, therefore, during the past year of the Western Fisheries Co., is an event worthy of record. The aim of this concern is to use power-propelled craft for trawling in our waters. The firm has the advantage of expert guidance in the person of two Italian experts who have first-hand experience of trawling. The firm has purchased a motor fishing vessel, which has been adapted for the purpose of fishing with trawl nets. Trawling experiments were started late in 1946 and their outcome is awaited with interest by the entire fish trade.

Last year's report contained reference to the India Fisheries Ltd. This firm's representative undertook a trip to America, where after consulting experts, placed an order with the firm of boat builders for a Purse-Seiner for Rs. 4,00,000. This vessel is now nearing completion. She is expected in this country early in June with the purse seine and other nets along with American master fisherman and a crew of four. The unit is expected to start work forthwith after its arrival in our waters.

There is a very wide gap between the present catch of fish and the potential consumer demand. The Government of India are now addressing all their efforts to make good this deficiency. The schemes contemplated by the Central Government envisage the choice of Bombay as the venue of the experiment. A Superintending Engineer, Deep-Sea Fishing Scheme, has been appointed by the Government of India with his headquarters in Bombay. A naval vessel "Berar" has been purchased and is being converted under this supervision. The Government of India have also purchased a vessel in the U. K. and propose to obtain two more vessels from the U. S. A. All these vessels will operate from Bombay and new methods of fishing by trawl nets, purse seine nets, Danish seine nets, etc., will be tried out.

The department, too, is devoting its attention to increasing the supplies of fish and with this end in view has built a power-vessel, from which long line and drift net fishing is being practised. The vessel which is 52 feet in length and equipped with a 165 B.H.P. engine, will enable the fishermen to range further afield than their present limits. The scheme is being financed by the Government of India and the Government of Bombay on 50 : 50 basis.

**4. Mangoes and fish brought by launches.**—The fishing vessels brought to Bombay from Ratnagiri between April and May, 1946 and March, 1947, 12,72,800 mangoes representing an approximate total weight of 6,36,400 lb. *vide* appendix II. The use of the launches has proved a boon to the agriculturists in the Ratnagiri District, who would not have got adequate returns from their crop had the big Bombay market not been brought within their reach during the period of war when the steamer communication with the coastal ports was suspended.

The total quantity of fish brought by launches was 30,86,425 lb. as against 30,04,341 lb. brought last year. Fish imported by Bombay Steam Navigation Co.'s steamers from Malvan and Ratnagiri during the year was 8,150 lb. Statistics of the quantity and types of fish brought are set forth in Appendix I.

**5. Fish landing facilities.**—The question of adequate fish landing facilities has been under consideration of the department for the past several years. A scheme embodying proposals for various improvements at Sassoon Dock were forwarded to the Chairman of the Bombay Port Trust and was accepted. The department has since then written to the Chairman requesting that the execution of the scheme be expedited so that the improved fish landing facilities will be available when the next fishing season starts.

**6. Provision of fish markets.**—The steady and growing expansion of the trade was testified by the Commissioner of the Bombay Municipality during the year. Speaking at a meeting of the Corporation, he referred to the impertive need for the establishment of a separate market for the wholesale and retail sale of fish. Experience of the past five years had proved, according to him, that the value of the trade had greatly outgrown the present limited capacity of the fish section in the Crawford market. The Commissioner stated that, to remedy the inconvenience of the public and the fish trade alike, the construction of a new market for the exclusive sale of fish was under consideration.

The construction of the fish market at Malvan, begun in 1945, is expected to be complete during the current year. The market will fill a long felt need.

The Superintendent of Fisheries (Coast), Karwar, visited Hubli, Dharwar, and Belgaum to study marketing of fish in towns in the hot region. Requisite information was collected by him from the Municipal Authorities in the towns he visited. His trip revealed that Hubli and Belgaum were devoid of fish markets although the volume of trade in fish in both places was considerable. The extent of the turnover is such that the department is now seriously addressing itself to the investigation of the prospect of the construction of up-to-date fish markets in the important towns in the Ghat area.

**7. Refrigeration facilities.**—The provision of refrigeration facilities and ice in adequate quantities is one of the most important functions of the department. The war years witnessed a phenomenal expansion in the demand for ice on account of the increase in the number of power vessels. The department afforded assistance to owners of ice-factories to obtain, at controlled rates, bricks, cement, galvanize piping, iron sheets, steel and brass plates.

One of the main problems confronting ice-factories related to supplies of ammonia which could not be brought out from the U. K. by the Imperial Chemical Industries, owing to unavailability of shipping space and the Government of Bombay, on the suggestion of this department, took up the difficulties of the Imperial Chemical Industries with the Government of India.

Several owners, *vide* statement below, were enabled either to expand their plant or to set up new factories as the result of this department's efforts on their behalf for the release of complete ice plant, building material, supply of electrical energy and adequate water.

#### *New plant.*

1. India Fisheries Limited, Sassoon Dock, Bombay (20 ton).
2. National Ice and Cold Storage, Arab Lane, Grant Road, Bombay (15 ton).
3. Andheri Ice and Cold Storage, Andheri, B. B. & C. I. Railway (20 ton).
4. Bassein Ice Factory, Bassein (10 ton).
5. Chaupatty Ice and Cold Storage, Babulnath Road, Chaupatty.
6. Bassein Ice Supply Co., Bassein (4½ ton).

#### *Extension.*

1. Bombay Coastal Refrigeration Co. Ltd., Sassoon Dock, Bombay (15 ton).
2. Siddley Ice Factory, Tardeo, Bombay (30 ton).

Facilities are also being made available to fishermen's organisations to establish ice factories. It is proposed to establish a 20 ton plant in Bombay during 1947-48, at a cost of Rs. 4,00,000 for the benefit of fishermen's organisations in the City. Three-fourths of the cost, it has been suggested, should be recovered from the organisation in easy instalments spread over a period of 10 years without interest, the remaining one-fourth being treated as subsidy.

It is also proposed to put up five ton ice plant at important fish landing sites along the coast, one plant to be erected each year during the four successive years. These plant will be made available to fishermen's associations or co-operative societies on subsidy-cum-loan basis. The cost of a five ton plant together with building should not exceed a lac and twenty thousand rupees.

The aforesaid proposal has been embodied in scheme No. 160, in the first five year plan for Post War Development.

8. **Improved design of sailing craft.**—With a view to ensure further increase in the supplies of fish, the department has designed a vessel capable of being equipped with a 22 B.H.P. engine, so that the fishermen are able to cruise over a wider range than now in search of fish. The proposed vessel will make an advance over the present sailing craft and will be fitted with improved type of sails and will be equipped with a 22 B.H.P. engine. The vessel will be deckless, but will have arrangement for storage of fish. The vessels are expected to cost about Rs. 26,000 apiece. It is proposed to build two such vessels in the first instance and make them available to fishermen's co-operative societies or associations. If these vessels prove popular it is proposed to build seven vessels each year and make them available to the fishermen, so that at the end of five years, the fish trade will have thirty vessels costing approximately rupees eight lacs. The scheme has been included in the first five year post war development plan of the department.

9. **Fishermen's trade accessories.**—The difficulties experienced by fishermen in obtaining twine, coal-tar, hooks, timber, etc. were considerably diminished during the year, the fishermen being enabled to obtain most of their requirements at reasonable rates.

*Twine.*—The Textile Commissioner allotted 135 bales of twine, of which 50 were from Kohinoor Mills, 60 from Dawn Mills and 25 from Raghuvanshi Mills. The twine manufactured by the Raghuvanshi Mills was not approved by fishermen. The quota of 110 bales from the remaining two mills was allocated between the three associations as under:—

	Kohinoor Mill,	Dawn Mills.
1. Akhil Koli Samaj Co-operative Fishery Producers' Society Ltd., Bombay.	12 bales.	14 bales.
2. Maharashtra Macchimar Parishad, Bombay.	36 ..	44 ..
3. Versowa Koli Sahakari Bhandar Ltd. ..	2 ..	2 ..

The allotment from the Dawn Mills has been discontinued from November, 1946. This leaves only 50 bales per month, which is inadequate. Arrangements are, therefore, being made with the Kurla Rope and Twine Making Mills to manufacture 16½ bales of twine each month. The twine manufactured by this Mill has been approved by the fishermen.

*Sail cloth.*—During the year a total quantity of 1,24,000 yards of sail cloth was released to the three fishermen's associations, viz. the Maharashtra Macchimar Samaj, Versowa Koli Samaj Seva Sangh and the Akhil Koli Samaj Parishad respectively. Thus, the fishermen did not experience any difficulty in the supplies of sail cloth.



**Timber.**—The work of effecting repairs to fishing boats and building new ones which was held up during the war, owing to unavailability of timber, was taken up by the fishermen. A number of applications from fishermen, duly recommended by their respective Samaj, were forwarded by this department to the Utilisation Conservator of Forests, Bombay Province, Poona, who has been pleased to release over 180 tons of timber to the fishermen.

About 65 tons of timber was released to Messrs. Ahmedi Shipyard for the construction of the 52 feet deep-sea shark fishing vessel of this department.

A release of 100 tons of teakwood has been recommended to a fisherman of Deogad who is building two launches for use as fish carriers.

**Coal-tar.**—No difficulty was experienced by the fishermen in obtaining their requirements of coal tar as the Bombay Gas Company very kindly released the requisite quantity of tar on the recommendation of this department.

**Hooks.**—The position regarding supply of hooks has considerably improved. A local firm, which was afforded facilities for import of hooks from the U. K., received 10,00,000 hooks in sizes varying from 1 to 16. The entire quantity was made available to the fishermen of this province at controlled rates through the fishermen's associations and Superintendent of Fisheries (Coast), of this department.

The department also received one lakh hooks from Messrs. Edgar Sealey and Sons, London, for the Maharashtra Macchimar Parishad. These will be distributed by the Parishad to its members. A further consignment of about ten lakhs of hooks is expected during the current year.

**10. Training of fisher-youths as mechanics and navigators.**—The scheme for the training of fisher-youths to serve eventually as engine drivers of the launches, was started in October 1933. As a result of satisfactory progress achieved during the past 13 years, the number of stipends (each stipend of Rs. 20 per month) awarded to the youths of the fishing community was raised by Government from five to ten per annum. The value of each stipend has also been enhanced to Rs. 30 per month. So far over 30 students have taken advantage. All the qualified candidates are now in independent charge of the launches.

A scheme to train fisher-youths as navigators has also been approved by Government and will be put into operation in April, 1947.

**11. Training of fisher-boys in foreign countries.**—Realising the advantage of study facilities, Government propose to send a batch of two students, with B.Sc. degrees, from the fishermen's community for training abroad for two years and after their return a fresh batch of two students, so that at the end of six years, six students will have received training. These students will specialise in the manufacture of shark liver oil, gelatin, shark skins, fish glue etc. They may also specialise in various methods of fish preservation, refrigeration, curing and smoking. This scheme is included in the department's post-war reconstruction plan for five years commencing from 1947-48.

**12. Marine Biological Research.**—Active steps towards the construction of an aquarium for the City were taken during the year when administrative approval was accorded to a scheme prepared by this department in consultation with the Public Works Department for fulfilment of the purpose underlying Mr. and Mrs. Taraporevala's donation referred to in last year's report.

The scheme has been included in the first five years' plan of the post war development and has been granted first priority. The total expenditure involved will be in the neighbourhood of Rs. 7,50,000.

**13. Loans and subsidies to fishermen.**—The number of fishermen applying for loans considerably increased during the year chiefly on account of the low rate of interest charged, with boats and nets serving as security. The total loans disbursed to fishermen during the year amounted to Rs. 1,55,850. Out of this a sum of Rs. 30,000 was sanctioned to Binga Fishermen's Co-operative Credit Society. The loan was used by the association for the purchase of launch. The vessel, named Somnath Prasad, was commissioned into service by Mr. G. D. Tapase, Minister for Industries and Fisheries, during his visit to Karwar in December, 1946. The fishermen availed themselves of the Minister's visit to Karwar to present him with an address.

Encouraged by the success of this venture, the association has now undertaken the construction of another hull for which the department has obtained 48 tons of timber.

A further loan of Rs. 20,000 was sanctioned to the Akhil Koli Samaj Fishery Producers' Co-operative Society Ltd., Bombay, to enable it to take up the quota of Dawn Mills twine. The balance of Rs. 1,05,850 was sanctioned to individual fishermen in this province.

Government were also pleased to sanction a subsidy of Rs. 10,000 to Binga Fishermen's Co-operative Society as it was the first association of fishermen formed for the purpose of marketing the fish caught by its members.

A subsidy of Rs. 400 was also sanctioned to a fisherman of Karanja in the Kolaba District for repairs to his boat which was severely damaged in a storm.

To overcome delays in the disposal of loan applications Government have been pleased to authorise the Director of Fisheries to make disbursements up to the extent of Rs. 25,000 in place of Rs. 10,000 subject to a limit of Rs. 2,000 in each individual case.

**14. Bureau of fisheries information.**—Advantage continued to be taken by the public of the useful work done by the Bureau. Apart from enquiries on routine matters such as smoked and cured fish, fishing vessels, engines suitable for installation on hulls, the Bureau had to consolidate for Government's use, information from various fishermen's associations, fish merchants, and other interested parties on subjects pertaining to the development of our fisheries. Similar information on kindred matter was furnished by the Bureau to the Government of India.

The fishermen of Utcheli and Pofran fishing villages in the Thana District complained through the President of the Thana District Macchimar Samaj that the light provided at the Navapur Custom Light House was not adequate and more powerful lighting arrangement was required. The subject was taken up with the Deputy Superintendent of Lighthouses, Bombay, who has forwarded a proposal to the Collector of Central Excise, Bombay, for the provision of improved lighting lamp at an estimated cost of Rs. 3,000 during 1947-48.

## FISH CURING YARDS.

15. (i) **Number of yards.**—The number of fish curing yards where business was conducted during 1946-47, was 34, of which 20 are in the Ratnagiri District and 14 in the Kanara District. Out of the total number of yards, 11 are in charge of 12 monthly yard officers, 14 in charge of 9 monthly yard officers, and the remaining are under petty yard officers.

(ii) **Fish cured at the yards.**—The fish that first appeared during the season were mackerel (bangda), catfish (shingala), gedar, sardine (pedwe), seer fish (surmai), sharks (mushi), dhodi, karli, dagol, khavli and jew fish (ghol). But they did not appear over the same period. The season for these was of brief duration, terminating within less than two months after it had started. The ghol fishery (jew fish) was a total failure. An indication of the extremely poor catches of these fish and the resulting limited turnover of the cured product with its consequent adverse effect on the prosperity of the yards, is available from the figures, which are contrasted with those for the previous year. The catch of mackerel amounted to 1,97,513 maunds as against 2,67,974 maunds in 1945-46; catfish amounted to 11,877 maunds as against 48,761 maunds; of gedar 11,811 maunds, as against 7,386 maunds; of pedwa 11,811 maunds as against 16,014 maunds; of seer fish 10,917 maunds as against 12,136 maunds; sharks 8,775 maunds as against 9,285 maunds; dhodi 3,756 maunds as against 8,258 maunds; ghol 1,256 maunds as against 10,422 maunds respectively.

The mackerel fishery ranked, as usual, foremost in importance among the fisheries of the province, but it did not show as large a turnover as last year. The season started unusually early mackerel being brought to Keni and Harwada yards in the Kanara District for curing as early as in the last week of August. The appearance of the fish earlier than usual lent support to the common belief among the fishermen that a good rainy season with record floods contained assured prospects of a good fishing season.

Catches of mackerel were heavy on our coast during October, this fact being reflected in the increased sales of salt as compared with the previous year. Sales during the period ended October, 1946, at Ratnagiri were 4,140 maunds as against 3,255 maunds; at Vijaydurg 1,214 maunds as against 840 maunds; Vengurla 1,400 maunds as against 970 maunds; Karwar 1,138 maunds as against 483 maunds; Binga 1,520 maunds as against 179 maunds; Chendia 3,041 maunds as against 730 maunds; Harwada 3,263 maunds as against 1,027 maunds; Keni 1,252 maunds as against 473 maunds; Gangavali 313 maunds as against 173 maunds. The mackerel season was, however, shortlived, its abrupt end in December, usually the peak period for catches, coming soon after the untimely rain and squally weather along the Ratnagiri coast in November and December. The early end of the season was accompanied by a big drop in the sales of salt at the 20 yards during the remaining part of the fishing season, the aggregate sales amounting to only 27,000 maunds—the lowest figure on record since the transfer of control of the yards to this department in 1936.

The mackerel season along the Kanara Coast, also proved to be equally disappointing and the catches were generally meagre. The only spot where appreciably dense schools were encountered being the Kodar Bay. Mackerel was available here till about the middle of February, so much so that all the rampan nets from Majali, Karwar, Bingi and Chendia were taken to Kodar. All the launches from

Bombay plied exclusively to Kodar, which furnished the sole source of supply of mackerel for transport to Bombay. The scarcity of mackerel elsewhere raised the price of this fish at Kodar to its highest level ever, fishermen obtaining at times as much as Rs. 60 per thousand mackerel.

The yards at Kodar, Harwada, Keni and Gangavli recorded heaviest transactions and the sales of salt amounted to 2,727 maunds, 16,155 maunds, 5,236 maunds, and 4,601 maunds as against 801 maunds, 3,250 maunds, 1,286 maunds, and 1,304 maunds, respectively in the last year.

The price of cured mackerel rose from Rs. 15 to Rs. 40 as against Rs. 8 to Rs. 12 per thousand in the previous year. The prices of other varieties of fish also rose on account of depleted stocks.

**16. Model fish curing sheds.**—The two master curers stationed at Malvan and Majali continued demonstrations in improved methods of curing fish. Continuance of the scheme for a further period of three years, with effect from April 1, 1946, was approved of by Government. The continuance of the scheme as a permanent measure is envisaged and with this end in view the Director of Fisheries has been asked to submit in 1950 to Government a proposal after reviewing the whole position.

The usefulness of the model sheds was demonstrated by the increasing number of fish curers who took advantage of the sheds. During the year 35 fish curers cured 30 maunds of Toki, 100 maunds of mackerel, 10 maunds of ghol, 200 maunds of surmai, 120 maunds of shark, 2,500 maunds of shingale and 1,000 maunds of karmat, at the model shed at Malvan by wet and dry methods. Three fish curers cured 3,000 maunds of mackerel at the Majali model shed by wet and dry methods.

At Malvan model shed 419 lb. of fish were cured departmentally by both the dry and wet methods. The total expenditure incurred on demonstration was Rs. 230 as against Rs. 692-11-6 in the previous year.

At the model shed at Majali 1,202 lb. of fish were cured departmentally. The total expenditure incurred on demonstration was Rs. 265 as against Rs. 1,026 in the previous year.

In addition to these two official sheds, three other improved sheds, the construction of which was referred in the previous year's report, have been provided by two fish curers of Majali and a fish curer of Karwar at their own cost and were in active use during the year.

The request of a fish curer at Shirali to erect a fish curing shed at his own cost at the Shirali yard is receiving favourable consideration.

**17. Lighting facilities.**—The difficulty on account of lighting facilities has been entirely met in the provision by Government of Petromax Lamps, introduction of which has been greatly appreciated by fish curers. The lamps so installed were freely used at the various yards in both the districts. The usefulness of this system of lighting was brought to the attention of the Minister of Fisheries, Mr. G.D. Tapase, by the fishermen of Keni on the occasion of his visit there.

**18. Opening of new yards—(1) Talasil.**—The total quantity of salt sold at this yard during the year totalled 234 maunds. This amount falls far short of the minimum figure of 1,800 maunds which is absolutely necessary for a yard to be self-supporting. The diminished sales of salt were due to the slackness of the season.

(2) **Palshet.**—Sanction to the continuance of the yard at Palshet was accorded by Government during the year. The sales of salt amounted to only 255 maunds. This figure is not at all encouraging but there are prospects of larger sales in the future in view of the purchase at this place of rampan nets.

(3) **Kodibag and Haldipur yards.**—The need for the establishment of fish curing yards at Kodibag and Haldipur, both in the Kanara Districts, was brought to the attention of the Minister for Fisheries by the fishermen at these two centres, on the occasion of his visit to Karwar in December. The whole question was considered by the department which came to the conclusion that prevailing conditions at both these centres were such as would not justify the establishment of fish curing yards.

19. **Improvements at the yards—(i) Boria yard.**—The question of acquiring  $3\frac{1}{2}$  gunthas of land in survey No. 125 p.h. 1 and 126 adjoining the fish curing yard at Boria for the erection of quarters for the yard officer continued to receive the attention of the authorities of the Revenue Department in the Ratnagiri District.

(ii) **Jaigad yard.**—The likely erosion of the Jaigad yard as a result of the steadily extending incursion of water from the creek continued to engage the attention of this department. To arrest the process, the Executive Engineer, Ratnagiri Division, Ratnagiri, suggested the construction of a stone groyne. In addition, he recommended that a regular contour survey of the area be undertaken to provide against future contingencies. The survey is in progress.

(iii) **Ratnagiri yard.**—The construction of 24 cement concrete platforms were completed by the Public Works Department, Ratnagiri, but the platforms could not be put to use by fish curers as they were required by the Public Works Department for the erection of superstructures over them. The department continued to charge to the fish curers the extra levy of one anna per every maund of salt sold and the amount recovered since the commencement totalled Rs. 697-16-0, this year's collection being Rs. 357-11-0 only. The balance of Rs. 1,198-1-0 yet remains to be recovered from the fish curers.

Work on the construction of a dry stone compound wall at this yard which was taken in hand by the Public Works Department, Ratnagiri, last year, will be completed during the current year.

(iv) **Malvan yard.**—The platforms, the construction of which was completed during the previous year, could not be used by fish curers as the superstructures had to be erected over them by the Public Works Department, Ratnagiri.

(v) **Deobag, Mobar and Kochra yards.**—Government accorded administrative approval for the construction of new salt kothars at Deobag, Mobar and Kochra yards at the revised estimates of Rs. 22,416, Rs. 17,424 and Rs. 12,300, including centage charges at 27 per cent. respectively. The work was entrusted to the Public Works Department, Ratnagiri.

(vi) **Majali yard.**—The work of providing cement concrete flooring to the verandah of the new salt kothar at Majali at a cost of Rs. 246 was entrusted to the Public Works Department, Karwar.

(vii) **Karwar yard.**—The provision of cement concrete flooring to the verandah of the new salt kothar at a cost of Rs. 280 was completed departmentally during the year.

The low lying area inside the yard compound at Karwar was raised to the ground level by filling it with hard murrum at a total cost of Rs. 1,000. The fishermen contributed Rs. 300 for the purpose. The levelled up ground is now being used by the fishermen for drying cured fish.

(viii) **Bingi yard.**—The construction of a dry compound wall of laterite stones sanctioned by Government at an estimated cost of Rs. 9,000 was taken up by the Public Works Department, Karwar, during the year and the work is in progress.

(ix) **Chendia yard.**—The question of the acquisition of the additional 21 gunthas of land from the adjoining survey numbers continued to receive the attention of the Deputy Collector, Karwar Division and a provision of Rs. 2,558 was made in this year's budget for the purpose.

(x) **Harwada yard.**—The work of providing cement concrete flooring to the verandah of the new salt kothar at a cost of Rs. 162 was entrusted to the Public Works Department, Karwar.

(xi) **Keni yard.**—Government accorded their administrative approval to the plans and estimates, the latter amounting to Rs. 576 for the original portion of the work on the additions and alterations to the existing temporary salt kothar at the Keni yard. The work was taken up by the Public Works Department, Karwar.

(xii) **Gangavali yard.**—Government accorded administrative approval to the plan and estimate, the latter amounting to Rs. 1,697 for providing laterite stone masonry plinth and renewing the wooden gate of the yard at Gangavali. The work was entrusted to the Public Works Department, Karwar.

(xiii) **Mullukurva yard.**—The Public Works Department, Karwar effected additions and alterations to the two temporary salt kothars at the Mullukurva yard. A permanent yard gate with some pillars and compound fencing of bamboos and jungle wood stakes was provided.

(xiv) **Shirali yard.**—Similarly, the semi-permanent quarters of the peons were repaired by the Public Works Department, Karwar, during the year under review.

20. **Improvement of curing facilities.**—Government approved of a scheme submitted by this department for improvements at the fish curing yards. These schemes related to:—

- (i) Construction of cement concrete platforms.
- (ii) Construction of permanent structures over platforms.
- (iii) (a) Sinking of wells.  
(b) Provision of pumps, storage tanks, water piping, etc.
- (iv) Enlargement of the storage capacity of salt kothars.
- (v) Erection of walls for the compounds of the yards.

A total provision of Rs. 5,58,000 has been made for the aforesaid improvements.

21. **Conversion of 9-monthly establishment into 12-monthly yards.**—In view of the unsatisfactoriness of the prevailing system of 9-monthly yards and the handicap to their efficient administration, a case was made out to Government for the abolition of the system and of its replacement by the 12-monthly system. The suggestion was accepted by Government and the reform was enforced by this department with effect from March 1 1947.

22. **Use of salt earth.**—Salt earth continued to be used on an extensive scale for the curing of fish by the fishermen of Kalbadevi, Purnagad, Mumbri, Mithbad Achra, Talasil, Deobag and Kochra in the Ratnagiri District and Majali, Kodar, Keni, Gangavali, Kumta, Manki, Murdeshwar, Shirali and Bhatkal in the Kanara District, despite ceaseless propaganda by the officers of this department against this practice.

23. **Issue price of salt.**—The issue price of salt to fish curers was reduced from Rs. 1-14-0 to Rs. 1-10-0 per maund with effect from October 1946 in view of the large surplus of Rs. 1,10,498 realised on the working of the fish curing yards since the assumption of their control on July 1, 1936, by this department.

24. **Transactions at the yards.**—During the year a total quantity of 3,13,851 maunds of fresh fish was brought to the yards, 92,271 maunds of salt were issued for curing fish, 28,355 maunds being issued at the yards in the Ratnagiri District and 63,916 maunds at the yards in the Kanara District as against a total quantity of 1,23,417 maunds issued last year in both the Districts. The quantity of cured fish removed from the yards was 2,19,533 maunds. 34,155 maunds of salt were indented from Uran for the yards in the Ratnagiri District and 61,997 maunds from Sanikatta for the yards in the Kanara District. The figures would have been slightly higher if the contractor had supplied salt more speedily from the Sanikatta Salt Works. The yards at Kodar, Harwada, Keni and Gangavli were without salt for several days at a stretch on more than one occasion. The need for salt was so great that fish curers brought salt from Sanikatta in trucks at great expense to themselves. The Superintendent of Fisheries (Coast), Karwar, visited Sanikatta specially to impress upon the contractor the urgency of speeding up supplies.

Contractors for the supply of salt to the fish curing yards in the Ratnagiri District, were unable to supply salt to the yards in time owing to labour unrest and communal tension at Uran and Sheva in the Kolaba District during November and December, 1946.

The stock of salt at all the 34 yards at the beginning of the year was 66,166 maunds and at its close 61,181 maunds. (Appendix II) page 81.

Some fishermen of Boria, Jaigad, Varoda, Ratnagiri, Manki yards availed themselves of the concession of taking duty-free salt to preserve the catch at seas. The quantity of salt issued for the purpose was 451 maunds in the Ratnagiri District and eight maunds in the Kanara District as against 472 maunds in the previous year in the two districts.

659 maunds of salt were issued to agriculturists free of duty from the fish curing yards for manurial purposes as against 730 maunds in the previous year. The issue price of denatured salt for manurial purposes remained unchanged namely annas thirteen per maund.

25. **Financial results.**—Reference is invited to appendix III which shows the *pro-forma* account of the fish curing yards. It will be noted that the net expenditure incurred during the year inclusive of the price of salt issued, pay of staff, pensionary charges, etc. was Rs. 2,17,084, as against this, the receipts were Rs. 1,64,777. The net loss from the operation of the yards was therefore, Rs. 52,307.

26. **Smoking of fish.**—The cessation of the demand from the army for smoke dried fish and its comparative unpopularity with the general consuming public led to the closure of three smoking houses at Majali, Bingi and Chendia. Thus, only one

ar, remained in operation and its products are used to supply this department at Crawford Market.

was smoked at Karwar, no other fish being available there. To the range of smoked product, small experimental smoke house was set up in Bombay, where such fishes as pomfrets, salmon, jew fish and sharks, among others, will be smoked.

27. **Co-operative societies.**—The Fish Curing Yard Establishment Co-operative Credit Society Ltd., Karwar, continued to do good work under the Chairmanship of the Superintendent of Fisheries (Coast), Karwar. At the close of the year, there were 96 members on its roll with paid-up share capital of Rs. 3,230. An aggregate loan of Rs. 3,477 was granted during the year and Rs. 2,855 were recovered in time. The society holds Defence Bonds of the value of Rs. 300 and Post Office National Savings Certificates of the value of Rs. 1,000.

Fishermen's Co-operative Credit Societies at Karla (Ratnagiri), Majali, Karwar and Bingi functioned as credit societies.

Fishermen of Rajiwada (Ratagiri) and Sakrinate (Jaitapur) formed societies and have applied to the Registrar of Co-operative Societies, Bombay Province, Poona, for registration.

As reported previously, the Binga Fisheries Co-operative Association Ltd., Binga, was registered in June 1946, under the Co-operative Societies Act (1925), and did good business during the year. At the close of the year the Association had on its roll 125 members of which 101 were fishermen. The amount of paid-up share capital was Rs. 22,289.

The Superintendent of Fisheries (Coast), Karwar, represented the department on the Managing Committee of the Society in order to advise the association in its work.

The association is receiving every assistance from this department in its plans for the establishment of an ice factory at Karwar.

Signs of the new awakening among fishermen are furnished by the desire of the fishermen of Jaitapur, Vijaydurg, Harwada and Bellikeri to establish co-operative societies, which, they now feel convinced, are the best medium for the advancement and protection of their interests.

28. **Supply of yarn and hooks.**—The greatest difficulty of the fishermen along the coast pertained to obtaining supplies of yarn and fish hooks. These were made available to them through the efforts of this department. Seven bales of cotton yarn were allotted to the District Honorary Organiser, Honavar, for distribution to fishermen of Kumta and 23 bales were allotted to the Bingi Fishermen's Co-operative Association for distribution to fishermen of Karwar and Ankola Talukas.

29. **Cold storage facilities.**—The useful role filled by the ice factories at Chendia (Kanara District) and Malvan (Ratnagiri District) was evidenced by the increasing use made of them by the fishermen. Unfortunately, the capacity of the plants is small, so that the fishermen's needs are not entirely met.

30. **Rural development and post-war reconstruction conferences.**—The Superintendent of Fisheries (Coast), Karwar, attended the District Officers' meetings convened by the Collectors of Ratnagiri and Kanara where rural development and allied matters were discussed. He also attended the Post-War Reconstruction



Conferences held at Ratnagiri and Karwar under the Chairmanship of Hon. Minister for Reconstruction and Excise.

31. **Agricultural show at Kumta.**—A feature of the agricultural show organised by the Government Agricultural Farm at Kumta was the display of fisheries products of various description, as well as scientific models and charts. The exhibits were appreciated by the visitors.

### CHAPTER III.

#### FISHERIES SCHOOLS.

32. Government directed the continuance on a permanent basis, with effect from May 4, 1946, of the two fisheries schools started sometime previously at Ratnagiri and Karwar in 1942 and conducted till then on a temporary basis.

The Superintendent of Fisheries (Coast), Karwar, conducted the annual examination, the results of which were satisfactory. The Fisheries School Certificate Examination which is the final examination was held at the two schools in October, 1946. Out of 15 candidates 9 from Karwar School and 6 from Ratnagiri School, 6 and 4 respectively were declared successful. Certificates were awarded to the successful students in the form duly approved by Government.

The usefulness of the two schools is evidenced by figures of attendance. The number on the rolls at the end of the financial year was 102 boys and 4 girls at Ratnagiri and 133 boys and 37 girls at Karwar, corresponding figures for the previous year were 120 boys in the Ratnagiri school and 102 boys and 23 girls in the Karwar School. The slight decline in attendance in Ratnagiri was due to an outbreak of plague there, which led to an exodus of people.

Mr. G. D. Tapase, Minister for Fisheries, visited the Karwar Fisheries School on December 12, 1946, accompanied by the Director of Fisheries, Bombay, and was pleased to observe as follows:—

“ I visited the school today and went round the classes. The classes were well kept and the boys were engaged in their work.

I was impressed by the general appearance of the school and its management.”

**School building at Karwar.**—A drawback of the school is that it is not housed in its own building, but in rented premises. To overcome this handicap, Government directed the acquisition of “ Vijaybhavan ”, the premises now housing the school, at a cost of Rs. 37,000. With this end in view, the Executive Engineer, Kanara Division, Karwar, is negotiating with the owner.

**Fisheries school at Satpati (Thana District).**—Government were pleased to sanction the continuance of the fisheries school at Satpati for a further period of three years from May 8, 1947. Sanction was also accorded to the continuance of the fixed pay of Rs. 90 per mensem to the Workshop Superintendent for the period. The school has all the eight classes including the infant class and 340 pupils were on its roll at the close of the year.

**Fisheries school at Ankola (Kanara District).**—The fisheries school at Ankola started work on March 1, 1946, with 28 boys on its roll. The school had only five classes including the infant. The 6th and 7th standards are to be provided as soon as the need for them is felt.

The Superintendent's workshop is being built on a vacant plot of land adjoining the school, at an estimated cost of Rs. 3,134.

**Mid-day Meals.**—The provision of free mid-day meals to children attending the fishery school at Karwar began on February 4, 1946. The total number of meals thus supplied was 17,084. Appreciation of this scheme is reflected in the number of pupils on the roll and the average daily attendance, the respective figure being 125 to 170 and 62·2 to 99·7, respectively.

The food though wholesome, is deficient in calorific value, according to Dr. R. E. Dadachanji, Nutrition Officer to the Government of Bombay, who visited the school and examined the children. His findings were accepted by Government, who, approving of his recommendations, enhanced the grant for the scheme from Rs. 3,500 to Rs. 5,100, so that the calorific value of the food might be brought up to 1,200 from 728 calories.

**Scheme for establishment of more schools.**—Schemes for the establishment of fishery schools at Kolak and Umarsadi (Surat District), at Jaitapur (Sakrinate), Mithbao (Tambaldeg) and Devbag (Ratnagiri District) and Majali (Gabitwada) in the Kanara District, submitted to Government with this department's letter No. E. 75 (2) 4264, dated November, 25, 1946, received their approval. The department is also investigating the possibilities of opening fisheries schools at other places on the coast of this province.

## CHAPTER IV.

### FRESH WATER FISHERIES—1946-47

33. The progress of work relating to the development of fresh water fisheries was considerably hampered by the uncertainty of obtaining carp fingerlings for stocking purposes. To help this province to tide over this difficulty, the Fisheries Development Adviser to the Government of India ordered out from America special trucks for the transport of live fish and placed one of them at the disposal of this department. The trucks were, however, considerably delayed in transit, arriving in Bombay late in the season. One of them was despatched to Jaunpore, in the U. P. via Allahabad to bring an experimental consignment of fingerlings. The truck loaded with 8,775 fingerlings left Jaunpore at 8 p.m. on February 23, 1947, and reached Pooa at 6 a.m. on February 27, 1947.

Despite strenuous efforts to ensure the safe arrival of the fingerlings, the mortality was exceptionally high, only 900 out of 8,775 reaching Pooa. The fingerlings were five inches in length at the time of despatch. The journey which was interrupted by engine trouble and other difficulties, involved a mileage of 1,024. The high mortality was evidently due to the grown up nature of the fingerlings and the unexpected delays during the journey.

Experience has shown that the roads are not good enough to enable the fingerlings to survive so long a journey. This mode of transport will, therefore, have to be abandoned in favour of carriage by rail.

Simultaneously, the department had arranged to import carp spawn and fry from Calcutta in specially reserved railway compartments, but no fry could be obtained from there on account of the communal disturbances in the city, the extensive floods in

Bengal at the time and the postal strike. Arrangements made for the import of fry from Patna also fell through for similar reason.

Meanwhile, the department made efforts to obtain fry from provincial sources. Attempts were made to collect fry from the rivers Sabarmati, Hathamati and Vatrak in Northern Gujarat. The collection yielded about 2,200 fry. These were grown when careful examination of them showed them to be uneconomic for the purpose in view.

The stocking of permanent waters was thus retarded. Present experience points to the handicaps in the way of the establishment of fresh water fisheries on a flourishing basis in our province. Certainty of success can be ensured only if fingerlings from outside the province can be transported safely and economically to our fish stocking centres, or if an independent source of supply is established within the confines of our own province. Meanwhile, attempts will have to be continued to stock, on as large a scale as possible, sheets of water in our own province with fry and fingerlings got from elsewhere, in the expectation that they will eventually breed and establish themselves in our waters.

Confirmation of the breeding of Rohu (*L. rohita*) in the Powai lake was obtained during this year, as young ones were captured. The breeding seems, however, to have been on a small scale as attempts during the monsoon to collect spawn or the fry were not successful.

A small consignment of fingerlings of *Etroplus suratensis* was imported from Karwar and released in the Bandra Creek during the year. Evidence of their breeding here was subsequently established. Their introduction is of importance inasmuch as it marks the establishment of a rapid breeding variety of fish in our creeks.

**Fish fattening experiment—Bandra tank.**—A small number of carp fingerlings introduced in the tank in 1946, was netted in May, 1947, the catches being disposed of on the spot for Rs. 260. Some of the murels which had bred in the tank were also captured and marketed.

**Gourami.**—Gourami continued to thrive and breed very satisfactorily in the Bandra tank. When the tank was dragged in May, 1947, about 80 Gourami weighing approximately 500 lb. were marketed for Rs. 200. Besides, the following institutions were supplied with fingerlings of Gourami bred in the tank:—

Director of Fisheries, Sind	..	..	..	50
Hydraulic Engineer, Bombay Municipality	..	..	..	100
Nagpur Weaving and Spinning Mills, Nagpur	..	..	..	50
Ahmednagar Municipality	..	..	..	100
B. P. Angling Association	..	..	..	100

The total number of fish removed from the tank during the year is 480 and still the tank holds a large number of both adult fish and fingerlings.

**Mirror carp.**—A consignment of mirror carp specially imported from Ootacamund, was liberated in a lake at the naval training establishment at Lonavala. The experiment was, however, in vain, as the authorities at the Naval Establishment omitted to instal a trap to prevent the escape of the fish during the monsoon.

**Marine fish farming.**—An experiment on a small scale has been undertaken to determine the rate of growth, food and other life habits of some of our common

estuarine fish so as to ascertain the possibilities of cultivating them in some of the low lying coastal areas on a commercial basis. A series of small ponds near the Bandra Creek have been taken over for this purpose, and arrangements to convert them into a small fish farm are under progress. One of the ponds has already been stocked with mullets collected during July, 1946, and the rest of the ponds will be stocked in the ensuing season.

A paper on Gourami culture was published in the December 1946, issue of India Farming, New Delhi.

Another paper on the Osteology of Indian Cyprinodonts Part I has been accepted for publication by the National Institute of Sciences of India, Calcutta.

## CHAPTER V.

### SHARK LIVER OIL.

34. The progress achieved by the shark liver oil industry since its establishment in October 1940, has been most encouraging and holds the promise of yet further expansion, provided that its development is on sound and systematic lines. Its future can only be ensured if purity and quality of the product are maintained at the highest possible level, which, the department has throughout striven to do. The department, so far, had to contend with a series of handicaps in the production of the oil, owing mainly to the fact that it did not have at its disposal a suitably equipped laboratory and modern plant and facilities for the manufacture of the oil.

Most of the adverse conditions will be surmounted with the provision of the laboratory now set up at Sassoon Dock. Special plant, of the most modern type, has been imported from Britain by Messrs. Balmer & Lawrie for this department and its operation will be greatly benefited by the personal attention and supervision of Dr. P. N. Sarangdhar, Superintendent (Marine), who has only recently returned from England, where he studied at Hull the latest and most advanced methods of extraction of liver oil in the laboratory of the "British Cod Liver Oil Producers (Hull) Limited".

A drawback of the fish liver oil is their pronounced fishy odour. This peculiar characteristic prejudices many people against the use of the oil. To eliminate the unpleasant smell characteristic of the oil a deodorizer has been ordered out by the Haffkine Institute from the U. S. A. and will be installed in the department's laboratory at Sassoon Dock.

The establishment of the laboratory will be justified only if there is a regular supply of livers for the plant. The livers now obtained come from sharks which chance to be caught. There is no regular shark fishing as such. The production of shark liver oil can only be maintained at a satisfactory level if the supply of livers is steady. With this end in view, the department has now undertaken an experiment which will concentrate on the capture of sharks both by line and hooks as well as by nets. A vessel has been built specially for the purpose. It is the first power-propelled craft to be put into service for catching fish as opposed to the present power-propelled craft which mainly transport fish caught by sail boats. The vessel which was named "Tapase" was commissioned towards the end of March and has thus not operated sufficiently long enough in order to yield any useful results. The season had almost ended when the vessel was launched so that scarcely any data could be gathered about its utility for the purpose for which it was designed.

The past year's output of neat shark liver oil amounted to about 3,000 gallons having an average vitamin A potency of 15,000, International Units per gramme. The oil when processed was capable of yielding 400,000 lb. of Oleum-vitaminatum of the B. P. standard. The output of neat oil just referred to is only in respect of oil that came to the department's laboratory. In addition, there is a very large quantity of oil produced by fishermen who sell it directly to trade interests. No records are available of the quantity thus disposed of, but it could not be less than 1,500 to 2,000 gallons.

A little over half the total output of 3,000 gallons of neat shark liver oil, produced by the department—namely 1,967 gallons—having an average vitamin "A" potency of 20,000 International Units per gramme and worth Rs. 46,672-8-0, was supplied to the Haffkine Institute for the manufacture of vitamin "A" concentrates and multi-vitamin tablets.

A small quantity of neat shark liver oil having vitamin "A" potency of 6,000 International Units per gramme was supplied to the Medical Profession for dressing wounds. A small quantity of neat oil of low vitamin "A" potency was also supplied to industrial concerns for curing leather, tempering steel and for use at Fire Stone Rubber Works.

Oil manufactured by this department for therapeutic needs amounted to more than 2,240 gallons known as Shark Liver Oil—Bombay Brand. The oil was worth Rs. 26,880. Over half the quantity of oil was supplied to Civil Surgeons of Government Hospitals and Public Institutions in and outside the Province of Bombay. In addition, 4,860, ten oz. bottles of Shark Liver Oil—Bombay Brand valued at Rs. 7,900 were disposed of during the year. The increased sales of oil have been due mainly to the orders placed with the department by the Surgeon General with the Government of Bombay on behalf of Civil Surgeons and official medical institution.

The sales of the oil ought to have been yet larger but for the fact that the Medical Practitioners' Co-operative Society, which was given an exclusive monopoly for the sale of the oil in Bombay City, was not energetic enough in bringing to the notice of the public the existence of the oil. Accordingly Government terminated the contract with them.

This case brings into sharp relief the fact that the oil manufactured by the department has not received its due publicity. Propaganda on an extensive scale is essential to acquaint the public that shark liver oil of great therapeutic value is manufactured by the department. As matters now stand, even the general body of medical practitioners, apart from the lay public, hardly knows that the department manufactures shark liver oil rich in vitamin "A" content and of a superior quality. To remedy this difficulty, a scheme has been submitted by this department to Government, providing for propaganda on a large scale.

**Elasmin.**—The department is now preparing to introduce on the market a new product—superior to shark liver oil—for which the term "ELASMIN" has been coined and which has been registered as a Trade Mark. Elasmin contains 20,000 International Units of vitamin A and 2,000 International Units of vitamin D per gramme. Its potency is thus 20 times that of ordinary shark liver oil produced by this department. The delay in the appearance of "Elasmin" on the market is due to factors connected with the preparation of cartons and literature explaining its value.

Vitamin A estimations of 300 samples of neat and diluted samples of shark liver oil were carried out in the laboratory of the department. These include samples tested on behalf of the public.

Dr. R. C. Shah, Head of the Department of Chemistry, R. I. S., was appointed Honorary Technical Adviser to the Department of Fisheries.

The commercial aspect of the industry has been most gratifying. The manufacture of the shark liver oil has more than paid for itself, its production having been on a profitable basis, after all expenses had been met.

**35. Ancillary Experiments—(i) Gelatin.**—Experiments for the manufacture of gelatin from fish maws were undertaken in the technological laboratory. The object underlying the experiments was to establish in our country an industry now conducted abroad. The experiments reveal that the fish maws were capable of being turned into a fine grade of jelly. Satisfactory results have been obtained from the experiments, but our present finished product is capable of yet greater improvement. Additional tests, are accordingly, being carried out by the department to turn out a product of a first class quality before it is put on the market, so that it can compete successfully with the best imported varieties.

**(ii) Fish glue.**—The fact brought to light from experiments was that our fish waste provided material for the manufacture of fish glue. Experiments in this direction were successful, and samples of the resultant product were sent to the Government Central Printing Press, Western India Match Co., and the Sundurdas Saw Mills. Both the Central Press and the Western India Match Co. stated that the glue was not quite suitable for their purpose owing to its liquid state. Experiments are being conducted to overcome this defect.

**(iii) Fish meal.**—Experiments on the manufacture of fish meal from fish waste have also been undertaken. Samples of fish meal prepared from fish waste on the bunder, were submitted to the Livestock Expert, Poona, and the Acme Poultry Farm, Poona. The Acme Poultry Farm, Poona, have approved of the sample and placed an order for the supply of a small quantity of meal. The test report from the Livestock Expert, Poona, is awaited.

**(iv) Shark skins.**—Shark skins have, so far, not found any commercial use in this country. Fishermen have, hitherto been throwing away the skins, which are capable of being turned into high grade leather. Experiments to process the skins into leather were undertaken by the Superintendent of Government Tanning Factory, Bandra. The preliminary results have been most satisfactory and hold promise of substantial progress.

## APPENDIX I.

Statistics showing the different varieties and quantities of fish (in lb.) brought by the launches in 1946-47.

MO-II Bk Qc 14-2a

Varieties of Fish.	Lady Sykes.	Sir Frederick Sykes.	Lady Brabourne.	Lord Brabourne.	Lady Colville.	Mackerel Queen.	Ruperal.	Razaki.	Noor-mohamedi.	Sitara.	Chand Tara.	
1. Pomfret (Saranga)	..	..	..	..	..	2,700	..	..	..	32	..	
2. Wamb (Eel)	..	..	..	..	..	..	..	..	..	..	..	
3. Bhakas	..	..	..	..	..	..	..	..	..	..	..	
4. Ghol	..	..	500	..	..	140	..	..	..	48	..	
5. Datali (Karli)	..	..	..	..	..	..	..	..	..	..	..	
6. Mackerel	..	58,000	93,375	185,135	243,032	390,880	244,970	185,960	60,000	86,350	237,058	137,580
7. Halva (Black Pomfret)	..	..	..	390	..	..	..	..	..	..	..	
8. Surmai (Towar)	..	..	100	8,600	..	70	..	..	..	121	..	
9. Dagol	..	..	..	..	..	..	..	..	..	50	..	
10. Kuppa	..	..	1,500	3,625	..	..	..	..	..	..	..	
11. Shingala	..	..	..	..	..	..	..	..	..	..	..	
12. Sardine	..	..	..	..	..	..	..	..	..	..	..	
13. Sword Fish	..	..	..	..	..	..	..	..	..	..	..	
14. Sakla	..	..	..	..	..	8,140	..	..	..	..	..	
15. Dara	..	..	..	..	..	..	..	..	..	..	..	
16. Mix	..	..	100	..	..	..	..	..	..	..	..	
17. Mullet	..	..	..	6,353	..	..	..	..	..	..	..	
18. Rawas	..	..	..	..	..	..	..	..	..	28,480	..	
19. Sharks and Rays	..	..	..	..	..	..	..	..	..	..	..	
Total	..	58,000	93,375	187,335	262,000	390,880	256,020	185,960	60,000	86,350	265,789	137,580

## APPENDIX I—contd.

Varieties of Fish.	Madina,	Gajanan Prashad.	King Fisher.	Somnath Prasad,	Subhani.	Vijaya Lakmi.	Vijay Lakmi.	Kanara Queen.	Divali.	Parlor-shaw.	Dhana Lakmi.	Diamond Jubilee.	Total.	
1. Pomphret (Saranga)	..	....	....	....	....	....	....	....	....	30	....	....	2,762	
2. Wamb (Eel)	..	....	....	....	....	....	....	....	....	....	....	....	....	
3. Bhakas	..	....	....	....	....	....	....	....	....	300	....	....	300	
4. Ghol	..	....	....	144	....	....	....	....	....	235	....	114	1,181	
5. Datali (Karli)	..	....	....	....	....	....	....	....	....	....	....	....	....	
6. Mackerel	..	219,350	132,600	18,570	118,350	130,800	44,800	64,700	13,440	26,800	....	73,000	244,014	3,008,764
7. Halva (Black Pomphret)	..	....	....	....	....	....	....	....	....	....	....	64	454	
8. Surmai (Towar)	..	....	....	....	....	....	....	....	....	....	....	4,600	13,491	
9. Dagol	..	....	....	....	....	....	....	....	....	....	....	110	160	
10. Kuppa	..	....	....	....	....	....	....	....	....	....	....	4,010	9,135	
11. Shingala	..	....	....	....	....	....	....	....	....	....	....	....	....	
12. Sardine	..	....	....	....	....	....	....	....	....	....	....	....	....	
13. Sword Fish	..	....	....	....	....	....	....	....	....	....	....	....	....	
14. Sakla	..	....	....	2,475	....	....	....	....	....	15	....	....	10,630	
15. Dara	..	....	....	....	....	....	....	....	....	....	....	....	....	
16. Mix	..	....	....	320	....	....	....	....	....	2,585	....	1,080	4,085	
17. Mullet	..	....	....	....	....	....	....	....	....	....	....	....	6,353	
18. Rawas	..	....	....	....	....	....	....	....	....	....	....	....	28,480	
19. Sharks and Rays	..	....	....	....	....	....	....	....	....	630	....	....	630	
Total	..	219,350	132,600	21,509	118,350	130,800	44,800	64,700	13,440	26,800	3,795	73,000	253,992	3,086,425



Serial No.	Name of Yard.	Year.	Quantity of fish brought to be cured.	Quantity of salt issued.	Quantity of fish removed	Proportion of fish to each maund of sale.	Total expenditure at the yards including pensions contribution.	Receipts.				
								Amount realised by sale of salt.	Miscellaneous receipts.	Stock of salt at the close of the year.	Value of salt in stock at the close of the year.	Total of columns 9, 10 and 12.
1	2	3	4	5	6	7	8	9	10	11	12	13
<i>Ratnagiri District.</i>			Mds. s. t.	Mds. s. t.	Mds. s. t.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Mds. s. t.	Rs. a. p.	Rs. a. p.
1	Palshet	.. 1945-46 ..	411 0 0	137 0 0	308 10 0	3'00	1,667 1 3	256 14 0	....	654 2 0	791 2 0	1,048 0 0
		1946-47 ..	765 0 0	255 0 0	573 30 0	3'00	1,655 5 9	414 6 0	....	776 32 0	941 14 0	1,356 4 0
		1947-48 ..	1,421 0 0	422 0 0	1,032 15 0	3'00	4,123 0 0	(a) 69 1 0				(a) 69 1 0
2	Boria	.. 1945-46 ..	1,464 0 0	404 0 0	1,229 20 0	3'62	1,272 8 3	752 10 0	9 5 6	1,320 0 0	1,497 11 0	2,259 10 6
		1946-47 ..	2,000 0 0	644 0 0	1,508 20 0	3'10	3,078 2 3	1,056 4 0	18 5 0	1,159 14 0	1,333 5 0	2,407 14 0
3	Jaland	.. 1945-46 ..	5,055 0 0	1,699 0 0	3,791 10 0	3'43	2,841 7 0	3,425 5 0	51 0 0	3,104 12 0	3,563 10 0	7,039 15 0
		1946-47 ..	8,784 0 0	3,010 20 0	6,588 0 0	3'10	7,269 15 6	5,430 3 0	60 0 0	2,891 20 0	3,390 4 6	8,880 7 6
4	Varoda	.. 1945-46 ..	2,394 0 0	798 0 0	1,795 20 0	3'00	1,348 4 7	1,448 10 0	19 6 0	695 35 0	769 12 2	2,237 12 2
		1946-47 ..	1,275 0 0	425 0 0	956 10 0	3'00	3,581 9 5	711 4 0	32 6 0	1,039 25 0	1,259 1 3	2,002 11 3
								(a) 1 10 0				(a) 1 10 0
Carried over ..		1945-46 ..										
		1946-47 ..										

APPENDIX II—contd.

Serial No.	Name of Yard.	Year.	Quantity of fish brought to be cured.	Quantity of salt issued.	Quantity of fish removed.	Proportion of fish to each maund of salt.	Total expenditure at the yards including pensions contribution.	Receipts.				
								Amount realised by sale of salt.	Miscellaneous receipts.	Stock of salt at the close of the year.	Value of salt in stock at the close of the year.	Total of columns 9, 10 and 12.
1	2	3	4	5	6	7	8	9	10	11	12	13
			Mds. s. t.	Mds. s. t.	Mds. s. t.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Mds. s. t.	Rs. a. p.	Rs. a. p.
	Brought forward	1945-46										
		1946-47										
5	Kalbadevi	1945-46	1,497 0 0	499 0 0	1,122 30 0	3'00	992 2 3	924 0 0	2 0 0	490 29 0	563 5 6	1,489 5 6
		1946-47	1,434 0 0	478 0 0	1,075 10 0	3'00	*139 6 6					
							2,753 1 6	796 12 0		965 29 0	1,191 6 3	1,988 2 3
							*167 8 0					
6	Mirkarwada	1945-46	7,085 0 0	2,331 0 0	5,313 30 0	3'46	3,416 14 0	4,211 4 0	1 9 0	801 21 40	1,052 0 0	5,264 13 0
		1946-47	3,970 0 0	1,292 0 0	2,966 30 0	3'07	4,196 1 0	2,335 4 0		1,052 10 0	1,401 2 0	3,636 6 0
7	Ratnagiri	1945-46	20,771 0 0	6,949 0 0	15,575 10 0	3'10	9,300 15 0	12,524 7 0	405 0 0	3,490 25 0	4,145 1 10	17,074 8 10
		1946-47	18,339 20 0	6,077 20 0	13,773 35 0	3'16	*641 10 6					
							14,140 0 0	11,313 3 0	481 5 6	5,134 3 0	6,225 0 0	18,019 8 6

8	Porngad	.. 1945-46 ..	1,668 0 0	556 0 0	1,245 0 0	3'00	992 7 9	1,029 12 0	35 0 0	877 14 40	951 2 4	2,015 14 4 0
		1946-47 ..	1,353 0 0	451 0 0	1,014 30 0	3'00	3,619 0 7	740 14 0	10 4 0	1,128 36 40	1,317 5 7	2,068 7 7
		(a)	63 2 0				(a)	52 13 0			(a)	52 13 0
9	Jaitapur	.. 1945-46 ..	5,664 0 0	1,888 0 0	4,248 0 0	3'00	3,437 1 1	3,324 12 0	3 1 0	2,329 28 0	2,754 12 8	6,082 9 8
		1946-47 ..	2,543 0 0	1,157 0 0	2,657 10 0	3'15	3,981 11 6	1,947 0 0	5 10 0	1,739 35 0	2,220 2 0	4,173 2 0
10	Vijaydurg	.. 1945-46 ..	4,579 0 0	1,526 20 0	3,434 25 0	3'00	2,312 15 6	2,716 8 0	4 14 0	1,509 25 0	1,768 11 4	4,490 1 4
		(a)	62 3 16				(a)	52 0 0			(a)	52 0 0
		1946-47 ..	4,545 0 0	1,515 0 0	3,405 15 0	3'00	6,113 10 11	2,901 4 0	6 0 0	1,873 36 0	2,197 4 3	5,104 8 3
		(a)	19 16 0				(a)	16 4 0			(a)	16 4 0
11	Mumbri	.. 1945-46 ..	2,838 0 0	594 0 0	2,128 10 0	4'74	1,880 11 9	1,069 2 0	8 0 0	574 5 0	724 13 3	1,801 15 3
		1946-47 ..	2,865 0 0	597 0 0	2,171 10 0	4'89	2,827 6 1	1,002 6 0	8 0 0	242 32 0	318 10 9	1,329 0 9
		(a)	121 10 0				(a)	101 9 0			(a)	101 9 0
12	Mithbao	.. 1945-46 ..	1,846 0 0	415 20 0	1,384 20 0	4'93	881 12 0	778 11 0	0 5 0	826 26 0	1,042 5 7	1,821 5 7
		1946-47 ..	2,690 0 0	584 0 0	2,007 10 0	4'60	2,619 7 0	951 0 0	4 8 0	683 11 0	862 9 8	1,818 1 8
		(a)	19 16 0				(a)	16 4 0			(a)	16 4 0
13	Achra	.. 1945-46 ..	3,492 20 0	756 20 0	2,619 15 0	4'62	1,854 0 3	1,418 7 9	2 3 0	1,110 14 40	1,387 5 0	2,807 15 0
		1946-47 ..	2,411 20 0	519 20 0	1,871 25 0	4'65	2,206 12 9	848 11 0	1 0 0	583 9 0	838 6 3	1,688 1 3

Carried over .. 1945-46 ..

1946-47 ..

## APPENDIX II—contd.

Serial No.	Name of Yard.	Year.	Quantity of fish brought to be cured	Quantity of salt issued.	Quantity of fish removed	Proportion of fish to each maund of salt.	Total expenditure at the yards including pensions contribution.	Receipts.				
								Amount realised by sale of salt.	Miscellaneous receipts.	Stock of salt at the close of the year.	Value of salt in stock at the close of the year.	Total of columns 9, 10 and 12.
1	2	3	4	5	6	7	8	9	10	11	12	13
			Mds. s. t.	Mds. s. t.	Mds. s. t.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Mds. s. t.	Rs. a. p.	Rs. a. p.
	Brought forward ..	1945-46 ..										
		1946-47 ..										
<i>Kanara District—contd.</i>												
14	Talasil	.. 1945-46 ..	4,018 20 0	810 20 0	3,021 25 0	4'92	1,597 8 0	1,692 12 0	1 7 0	850 38 40	1,030 0 0	2,724 3 0
		1946-47 ..	948 20 0	234 20 0	694 5 0	4'05	2,251 2 0	393 7 0	1 4 0	1,406 10 40	1,704 15 6	2,099 10 6
15	Malwan	.. 1945-46 ..	58,812 0 0	12,176 0 0	44,109 0 0	4'00	12,935 5 0	22,034 12 0	423 11 0	2,911 26 0	3,355 10 0	25,814 1 6
		1946-47 ..	21,847 0 0	4,755 0 0	16,385 10 0	4'59						(a) 28 6 0
			(a) 35 36 0				12,687 2 6	8,967 10 0	214 0 0	4,963 3 0	5,710 15 0	14,901 9 0
								(a) 30 1 0				(a) 30 1 0
16	Deobag	.. 1945-46 ..	17,816 20 0	4,722 20 0	13,131 10 0	3'77	6,547 15 11	8,961 7 0	44 1 0	2,517 30 0	2,864 0 0	11,869 8 0
		1946-47 ..	7,601 0 0	1,847 0 0	5,731 20 0	4'11	6,468 12 3	3,416 4 0	7 13 0	3,101 5 0	3,527 8 4	6,951 9 4
								(a) 20 5 0				(a) 20 5 0

17	Mobar	.. 1945-46 ..	10,446 0 0	2,815 0 0	8,003 30 0	3'71	3,489 1 0	5,117 13 0	11 7 0	2,102 23 0	2,391 10 10	7,520 14 10
		1946-47 ..	4,618 0 0	1,168 0 0	3,391 0 0	3'95	3,399 1 1	7,076 12 0	6 3 0	1,702 31 0	1,964 0 0	4,046 15 0
18	Kochra	.. 1945-46 ..	3,188 20 0	732 20 0	2,466 0 0	3'36	1,398 0 7	1,333 5 0	45 3 0	1,075 5 0	1,311 14 0	2,690 6 0
		1946-47 ..	3,002 0 0	733 0 0	2,313 25 0	4'95	2,763 0 6	1,244 12 0	59 12 0	302 10 0	367 15 0	1,672 7 0
			(a) 3 35 0				(a) 3 4 0				(a) 3 4 0	
19	Vengurla	.. 1945-46 ..	18,498 0 0	5,372 0 0	12,808 0 0	3'42	7,959 12 3	10,359 0 0	8 5 0	2,490 30 0	2,899 6 1	13,266 11 1
			(a) 475 12 0				*245 11 0	(a) 369 11 0			(a) 369 11 0	
		1946-47 ..	5,696 20 0	1,675 20 0	3,672 15 0	3'40	7,475 2 0	2,915 3 0	8 6 0	2,834 26 0	3,323 15 9	6,273 8 9
			(a) 184 12 0				*349 2 8	(a) 154 6 0			(a) 154 6 0	
20	Shiroda	.. 1945-46 ..	10,119 0 0	2,883 0 0	7,178 0 0	3	3,808 13 0	5,353 12 0	18 8 0	2,260 2 0	2,740 4 11	1,909 14 11
		1946-47 ..	3,729 20 0	936 20 0	2,797 5 0	3'98		(a) 13 0 0			(a) 13 0 0	
			(a) 15 21 0				4,541 6 0	1,500 3 0	26 0 0	2,485 20 0	3,025 5 10	4,551 8 10
							(a) 142 3 0				(a) 142 3 0	
<hr/>												
Total for Ratnagiri District.		1945-46 ..	181,663 0 0	48,065 0 0	134,913 35 0	69'19	69,939 12 8	88,732 9 0	1,092 6 0	35,774 30 8	37,604 10 6	127,429 9 6
			(a) 599 37 56				*1,026 12 0	(a) 463 1 0			(a) 463 1 0	
		1946-47 ..	101,447 20 0	28,355 0 0	75,554 35 0	73'75	97,622 14 7	50,852 15 0	950 12 6	36,067 8 0	43,130 3 11	94,943 15 5
			(a) 447 7 0				*1,262 8 2	(a) 607 12 0			(a) 607 12 0	

\* Expenditure incurred by the Public Works Department on structures at the yards transferred.

## APPENDIX II—contd.

Serial No.	Name of Yard.	Year.	Quantity of fish brought to be cured	Quantity of salt issued.	Quantity of fish removed	Proportion of fish to each maund of salt.	Total expenditure at the yards including pensions contribution.	Receipts.				
								Amount realised by salt of salt.	Miscellaneous receipts.	Stock of salt at the close of the year.	Value of salt in stock at the close of the year.	Total of columns 9, 10 and 12.
1	2	3	4	5	6	7	8	9	10	11	12	13
			Mds. s. t.	Mds. s. t.	Mds. s. t.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Mds. s. t.	Rs. a. p.	Rs. a. p.
<i>Kanara District.</i>												
1	Majali	.. 1945-46 ..	35,037 0 0	9,814 0 0	22,323 0 0	3'57	16,269 5 11	19,099 12 0	32 9 0	4,938 1 0	5,937 15 6	25,070 4 6
			(a) 14 22 0				*85 13 0	(a) 12 3 0				(a) 12 3 0
		1946-47 ..	22,662 0 0	7,369 0 0	15,294 0 0	3'08	10,180 6 10	12,661 3 0	36 15 0	3,254 25 0	3,905 8 10	16,603 10 10
			(a) 24 10 0				*1,885 0 0	(a) 20 5 0				(a) 20 5 0
2	Karwar	.. 1945-46 ..	42,316 0 0	12,100 0 0	30,939 30 20	3'49	14,837 10 7	23,287 3 6	91 6 6	2,438 34 0	2,701 0 3	26,079 10 3
			(a) 23 11 16					(a) 19 8 0				(a) 19 8 0
		1946-47 ..	16,793 36 0	5,471 20 0	11,532 1 0	3'07	12,576 5 1	9,646 7 0	50 0 0	3,403 11 0	3,752 1 9	13,448 8 9
			(a) 4 34 0					(a) 4 1 0				(a) 4 1 0
3	Uingri	.. 1945-46 ..	62,304 0 0	19,995 0 0	42,561 0 0	3'09	29,130 8 4	38,507 14 0	1 12 0	4,724 16 0	5,326 12 3	43,836 6 3
			(a) 19 16 40				*100 3 0	(a) 16 4 0				(a) 16 4 0
		1946-47 ..	23,208 0 0	7,072 0 0	16,344 0 0	3'28	13,243 13 6	12,476 6 0	7 0 0	5,633 7 0	6,548 9 1	19,031 15 1
			(a) 22 12 40				*166 0 0	(a) 18 11 0				(a) 18 11 0

4	Chendia	.. 1945-46 ..	44,902 20 0	14,378 0 0	33,676 35 0	3-22	9,270 9 5	8,193 14 6	16 14 0	2,650 36 0	3,081 10 8	11,292 7 2	
							*75 0 0						
		.. 1946-47 ..	30,189 0 0	9,800 0 0	22,641 30 0	3-08	14,562 0 0	17,087 4 0	44 0 0	4,057 6 0	4,536 6 0	21,667 10 0	
		(a)	17 18 32			*151 0 0	(a)	14 10 0			(a)	14 10 0	
5	Kodar	.. 1945-46 ..	2,457 0 0	812 0 0	1,842 30 0	3-02	1,609 3 0	1,517 4 0	0 10 0	1,845 4 0	1,990 0 9	33,180 5 9	
		.. 1946-47 ..	8,223 0 0	2,741 0 0	6,167 10 0	3-00	6,552 6 6	4,564 10 0	2 0 0	2,257 1 0	2,510 15 0	7,077 9 0	
		.. 1945-46 ..	28,707 20 0	7,953 20 0	8,180 0 0	3-11	8,800 12 2	5,888 8 6	37 8 0	2,452 36 0	3,041 9 6	8,967 10 0	
		(a)	24 10 0			*100 0 0							
		.. 1946-47 ..	59,890 0 0	16,390 0 0	34,895 0 0	3-71	23,063 12 10	28,794 9 6	1,037 0 0	1,413 29 0	1,649 11 0	31,481 4 6	
		(a)	75 26 32			*240 0 0	(a)	63 6 0			(a)	63 6 0	
7	Keni	.. 1945-46 ..	4,648 30 0	1,317 20 0	2,439 30 0	3-52	2,370 14 4	2,470 5 0	0 12 0	1,773 37 0	2,140 10 11	4,611 12 8	
			(a)	9 28 0			*269 9 0	(a)	8 2 0			(a)	8 2 0
		.. 1946-47 ..	17,600 0 0	5,408 0 0	12,182 0 0	3-25	8,060 13 2	9,289 8 0	5 8 0	121 8 0	147 4 2	9,432 4 2	
		(a)	19 16 0			*226 0 0	(a)	16 4 0			(a)	16 4 0	
8	Gangawali	.. 1945-46 ..	5,031 10 0	1,409 20 0	3,773 17 40	4-79	2,545 4 10	2,640 3 0	3 4 0	1,033 10 0	1,144 5 0	3,787 12 0	
		.. 1946-47 ..	14,007 30 0	4,601 20 0	10,324 15 0	3-04	7,284 15 9	7,681 7 0	4 0 0	837 12 0	925 4 0	8,610 11 0	
			(a)	7 30 32			(a)	6 8 0				(a)	6 8 0

## APPENDIX II—contd.

Serial No.	Name of Yard.	Year.	Quantity of fish brought to be cured	Quantity of salt issued.	Quantity of fish removed	Proportion of fish to each maund of salt.	Total expenditure at the yards including pensions contribution.	Receipts.				
								Amount realised by sale of salt.	Miscellaneous receipts.	Stock of salt at the close of the year.	Value of salt in stock at the close of the year.	Total of columns 9, 10 and 12.
1	2	3	4	5	6	7	8	9	10	11	12	13
			Mds. s. t.	Mds. s. t.	Mds. s. t.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Mds. s. t.	Rs. a. p.	Rs. a. p.
9	Kumta	1945-46	2,315 0 0	573 0 0	1,810 30 0	4.03	1,547 12 6	1,074 6 0	1 8 0	861 0 0	1,130 1 0	2,205 15 0
			(a)	11 26 0			*146 15 9	(a) 9 12 0				(a) 9 12 0
		1946-47	1,463 0 0	435 0 0	1,117 0 0	3.46	1,879 8 0	708 2 0	3 0 0	408 0 0	535 8 0	1,246 10 0
							*232 0 0					
10	Malukurwa	1945-46	8,895 0 0	1,779 0 0	7,116 0 0	2.11	3,695 14 7	3,333 13 0	61 0 0	1,208 28 64	1,320 11 9	3,388 12 3
				(a)	27 6 32		*176 14 0	(a) 22 12 0				
		1946-47	3,259 20 0	670 20 0	2,583 5 0	4.83	2,761 0 0	1,090 5 0	40 8 0	606 20 0	735 5 0	1,876 2 0
				(a)	40 29 48		*214 0 0	(a) 66 10 0				(a) 66 10 0
11	Manki	1945-46	33,290 0 0	700 0 0	2,628 0 0	3.87	1,540 12 5	1,312 8 0	62 0 0	1,048 28 0	1,280 12 5	2,665 4 5
		1946-47	2,992 0 0	660 0 0	2,314 0 0	4.53	1,814 14 4	1,088 4 0	32 0 0	374 34 0	454 3 6	1,574 7 6
				(a)	8 0 0							



12	Murdeswar	.. 1945-46	.. 5,499 0 0	1,291 0 0	3,410 0 0	4.31	2,689 15 3	2,420 10 0	22 8 0	1,276 20 0	1,509 7 5	3,952 9 5
							*92 14 0					
		1946-47	.. 3,158 20 0	754 20 0	2,368 35 0	4.20	3,182 10 9	1,226 1 0	16 0 0	964 30 0	1,169 3 4	2,402 4 4
							*133 0 0					
13	Shirali	.. 1945-46	.. 10,642 0 0	2,857 20 0	7,785 0 0	3.72	2,714 13 3	5,347 11 0	....	1,962 5 0	2,285 14 0	7,633 9 0
							*176 1 0					
		1946-47	.. 5,563 0 0	2,635 0 0	5,928 0 0	3.25	4,456 3 3	4,307 14 0	7 8 0	781 30 0	916 10 0	5,232 0 0
							*1,269 0 0					
14	Bhatkal	.. 1945-46	.. 1,366 0 0	372 0 0	994 0 0	3.64	1,272 9 0	696 6 0	15 6 0	1,335 19 0	1,183 11 6	1,896 7 6
							*108 10 0					
		1946-47	.. 415 0 0	135 0 0	280 0 0	3.07	1,878 9 6	219 10 0	18 0 0	1,200 19 0	1,100 11 0	1,338 5 0
							*108 0 0					
Total for Kanara District.		1945-46	.. 257,540 0 0	75,352 0 0	185,750 17 60	49.47	109,003 5 4	145,475 13 9	844 9 9	30,391 1 0	34,881 1 5	181,201 8 11
				(a) 130 0 8			*1,355 10 0	(a) 108 14 0				(a) 108 14 0
		1946-47	.. 212,424 16 0	64,151 0 0	143,971 16 0	48.85	111,445 1 3	110,841 10 6	1,303 7 0	25,313 32 0	28,878 4 8	141,023 6 2
				(a) 212 17 24			*6,424 0 0	(a) 210 7 0				(a) 210 7 0
Total for Ratnagiri and Kanara District.		1945-46	.. 439,203 0 0	123,417 0 0	320,664 12 60	118.66	178,942 5 4	234,268 6 9	1,936 15 0	66,165 31 8	72,485 11 11	308,631 2 5
				(a) 729 37 64			*2,382 6 0	(a) 571 15 0				(a) 571 15 0
		1946-47	.. 313,871 36 0	92,506 0 0	219,526 11 0	122.60	209,067 15 10	161,704 9 6	2,254 3 6	61,381 0 0	72,008 8 7	235,967 5 7
				(a) 659 24 24			*5,886 8 2	(a) 818 3 0				(a) 818 3 0

## APPENDIX III.

Pro-forma Account of the Fish Curing Yards on 31st March 1947.

Expenditure.					Receipts.					
					Rs.					
Opening stock of salt	..	..	..	Rs. 72,486	Total amount remitted to Treasury	..	..	..	Rs. 1,64,805	
Purchase and transport charges of salt	..	..	..	1,10,596						
				Rs.	Less—Overtime fees received from the fish curers and credited to treasury during 1946-47 but to be disbursed to the staff during 1947-48	..	..	..	Rs. -28	
Petty construction and repairs	..	..	5,555	} 11,442						
Add—Public Works Department	..	..	5,887							
Non-contract contingencies	..	..	12,123	} 12,123						
Add—Cost of stationery	..	..	504							
Articles less On account of model sheds	..	..	-504							
Pay of Yard Supervising Establishment..	..	..	46,096	} 43,026					Rs. 1,64,777	
Less—On account of model sheds	..	..	-1,999			Add—Net loss during the year	..	..	52,307	
Less—On account of smoked fish scheme ..	..	..	-1,071							

Allowances, Honoraria, etc. .. ..	34,433	
Less—On account of model sheds .. ..	992	
Less—On account of smoked fish scheme .. ..	697	32,744

Establishment charges payable to Government Departments etc., charges paid to Salt Department for providing escort to accompany salt for the Fish Curing Yards .. ..	2,830	
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Total Expenditure .. ..	2,85,247	
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Add—Pensionary charges at $9\frac{1}{2}$ per cent. at the maximum of the pay scales .. ..	3,846	
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2,89,093

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Less—Value of salt at close of transaction .. ..	72,009	
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2,17,084

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2,17,084

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