R E P O R T

on some economic problems

of the Northern Territories

of the Gold Coast.

1952.

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Department of Economics
University College of the Gold Coast.

20.5.1952.

Dear Major Burden,

As you know, I was asked last year by the Territorial Council of the Northern Territories to continue the economic survey, undertaken by Dr. Raeburn, in the light of the changes which have occurred and the additional experience which has been gained since he visited the Northern Territories. I have not attempted to cover the same ground as he did; it would have been presumptuous on my part and a waste of my time and yours.

Basing myself on Dr. Raeburn's report, I concentrated my attention on:

1. Two case studies, namely:
   - the problem of the shea tree, including the export of kernels and the industrialisation of butter manufacture, and
   - the problem of the transit of cattle from French territory and possible measures for diminishing their losses in weight and numbers.
2. Some obstacles in the way of the development of the Northern Territories.
3. Regional, as opposed to centralised departmental, planning.

I have also mentioned one aspect of the financial problems involved in the Gonja Development Company's activities.

Additional problems deserving investigation have arisen during my work, and I have repeatedly felt the lack of certain basic items of information. With your kind permission, I intend to mention such problems and items in an additional report.

I should also like, for the use of any future investigators, to be allowed to record in the additional report some of the information which I have been able to gather during my work, but which I do not include in the present report as it would make it unduly long.

I should like to express my appreciation of the help I have had from the members of all the departments in the Northern Territories. They have received me kindly and they have willingly and openly discussed with me the problems in which I was interested. I have learnt a great deal from them and I should be very pleased if the present report could repay some of my debt by throwing some new light on problems whose details they know much better than myself.

Yours sincerely,

Barbu Niculescu.

Major G.N. Burden, C.M.G.,
Chief Regional Officer
of the Northern Territories,
TAMALE.

SHEA.

1. An appreciable amount of work has already been done during the last thirty years and more concerning the improvement of yields of individual shea trees, the estimation of density of the tree population throughout the Northern Territories, the estimation of average yields per tree, as well as studies of various local methods of butter extraction and their efficiency, and of the uses to which the butter is being put. Such investigations, though extremely valuable, have suffered from a certain lack of continuity. Recently, the French Institute for Research into Oils and Oil-bearing plants (I.R.H.O.) have set up a special Research Station at Nyangoloko in the Upper Volta, one of whose main purposes is to study shea trees, including the possibility of speeding up growth and improving yields by such means as grafting. It might be to the interest of the Northern Territories if liaison were established with the station at Nyangoloko for possible co-operation in the study of the problem.

2. On the basis of the knowledge in existence, as far as I am aware of it, the following points seem to be relevant:

Most of the studies of the economic possibilities of shea have been made in connection with an export trade of either kernels or butter. All such studies, so far as they relate to the Northern Territories, have resulted in the conclusion that an export trade could only be carried on at a loss.

3. Such losses would be due to:

(a) The high cost of kernels from the producers, which is well above that in neighbouring French Territories or in Nigeria.

(b) The high cost of transport by road to the coast.

(c) The unreliability of the world market for shea butter.

(a) and (b) might possibly be altered, if special efforts were made. The world market for shea butter is, however, outside our control.

4. The world market for shea butter is of two kinds:

(a) The same as that for groundnuts and palm oil, namely the general market for fats which are employed in making margarine, soap or similar products. An increased availability of other fats which, on the whole, are technically easier to deal with, can only lead to a very rapid decrease in the demand for shea butter for this purpose. This is the stage which, for the first time since the war, we seem to be reaching at present.

(b) A specialised market, for shea butter in its own right, which is itself of two kinds:

(i) As a substitute for cocoa butter in chocolate, mainly with certain French chocolate manufacturers;

(ii) for a special kind of pastry known as feuilletage, or French pastry, for which shea butter seems to be the best available fat, partly through its greater chemical stability and partly because of special properties which may be due to the fact that it contains a certain amount of latex.

To-day shea butter seems to be becoming increasingly popular for this kind of pastry, not only in France and Europe, but also in the United States. All the same, the demand for it for this purpose is still comparatively small.

5. Thus, though some interesting possibilities as a cocoa butter substitute and, especially, for feuilletage, may be kept in mind, the bulk of the demand for shea butter is for purposes for which it has close and technically better substitutes; the demand would therefore fluctuate to an extent which would make an industry based only on exports a rather risky enterprise.

6. Another possible approach to the problem of a fuller utilisation of shea nuts has been suggested: it would involve the supply of factory made shea butter to the local market, and it would be based on the difference between the present extraction rate of butter by local methods, which has been calculated to be of about 19-22% of butter per weight of dry kernels, and the industrial method which extracts well over 40%, thus doubling the extraction rate.

7. To make use of this highly improved yield, and at the same time to overcome the problem of seasonal fluctuations in supply and certain storage difficulties, a combined extraction plant for shea butter and ground-nut oil could be erected at some such central point as Tamale. (Cf.para. 30-32). Such plant would evidently have to be run under expert supervision. An arrangement whereby a company with experience in such dual extraction methods could take over the responsibility of running the plant, either permanently, or at least until there are sufficient highly trained people in this country to take it over, might be convenient. I have put forward proposals along these lines to the proper authorities.

8. A proportion of the output of such a factory should find a ready local market. The stability of the local market would enable the new industry to venture into the more risky field of exports whenever it appeared profitable to do so.

9. One fact which would have to be taken into consideration, when deciding on the possibility of erecting such a factory, is that the collection of shea nuts takes place at the same time as the main harvesting season. A demand for a <u>larger</u> quantity of kernels than collected at present might thus throw some additional strain onto the women and children who collect them. At the same time, the making of butter by the local people takes place during the slack season, when they are in any case less occupied. A factory would thus increase work during the busy season, and decrease it during the slack season. This would have to be put in the balance as against the already mentioned fact that a factory would almost double the output of butter from the same quantity of kernels as compared to the local methods of extraction.

10. If the proposal to establish a factory along the lines put forward by me, or along any other lines, were to be considered by the relevant authorities as economically feasible, a preliminary measure might be useful: the local market for shea nuts could be nursed along and developed to ensure that the necessary quantities of kernels are readily forthcoming, to enable the factory to run to capacity from the start. The Produce Marketing Board attempted last year to develop such a market in the Northern Territories for the export of kernels to Europe. It thus hoped to open the way to a continuation, by private enterprise, of the collection and marketing of the kernels.

Unfortunately, so far, no private individual or enterprise (with one possible exception) is ready to continue the experiment at their own risk. If the creation of a steady kernel market should become desirable for the reasons stated above, a variation, in the light of last year's experience, on the arrangements made by the Board, might enable the collection and export of kernels to be continued, as an interim measure, without involving the Board in losses comparable to those already incurred. I have suggested to the appropriate authorities one way in which this might be achieved.

CATTLE IN TRANSIT.

11. Some 70,000 cattle entered the Northern Territories in transit from the French territories in 1951. During their journey such cattle incur losses both in numbers and, especially, in weight. From the information I could gather these losses, which might amount to as much as one-third or even one-half, by carcase weight, of all cattle in transit, seem to be attributable to four different reasons:

(a) Inadequate water supplies en route.
(b) Inadequate feeding.
(c) Disease.
(d) Too fast a rate of travel.

12. a. On the Bawku to Prang route water supplies seem to be on the whole adequate. The two gaps in the series of water points are at Nagbogo and Sekpe. At Nagbogo, the Department of Rural Water Supplies has already put in shallow wells for human consumption. This seems to indicate that water is easily accessible, and it might therefore not be too difficult to improve water supplies also for the cattle. If necessary this could be done by the local authorities, without drawing on the resources of the Department of Rural Water Supplies. At Sekpe the problem is more difficult as there does not seem to be any easily accessible water supply: the presence of bilisi is a confirmation of this fact. The cattle might have to be driven over that one stretch, involving two days' journey, without watering, unless sufficient money, equipment and personnel could be found for sinking a deep well or, possibly, for erecting a dam for the storage of rainy season water.

13. b. Discussions between the relevant departments, the administration and the local authorities would evidently be useful to show whether any supplies of fodder could be laid in for use, against payment, by the cattle in transit, but I do not believe that such storage of fodder would be a feasible proposition in the near future.

14. c. A good deal of the losses in weight of cattle may be caused by trypanosomes. (The fear of losses through sleeping sickness seems to be one of the reasons for the fast driving of cattle, in an attempt to avoid infection and death while on the road.) The possibility of checking on cattle at Mogonori not only for rinderpest but also for sleeping sickness, and of treating those which show signs of disease with tartar emetic or a similar drug, may be well worth investigating. The treatment should be against payment, and a decision of principle might have to be taken by the relevant authorities on whether it should be voluntary or compulsory. Full scale treatment of <u>all</u> the cattle in transit, both healthy and sick, with antrycide or a similar drug might not be economic for the twenty days' journey to Prang or even the longer journey to Kumasi and beyond.

15. d. Cattle are being driven from Bawku to Prang (approximately 250 miles) sometimes in as little as 12 days. There seem to be three reasons for this fast driving:

i. The desire to "catch the market" at Prang before other cattle herds and thus get a higher price for the cattle.

ii. The fact that the drivers seem in general to be paid by the journey, which implies that the quicker they hand over the cattle in Prang, the earlier they will be able to undertake other work.

iii. The fear mentioned above (para. 14) that delay might mean the loss of cattle through sleeping sickness before the owners have got rid of them at Prang.

From time to time localised lack of water or of feeding stuffs due to exceptional draught may also add to the desire for a quick journey.

16. The fast driving imposes a very heavy strain on the cattle. A compulsory slowing down of the rate of travel might well be envisaged. Such a compulsory slowing down might give rise to certain objections in connection with the points raised under i., ii., and iii. If the slowing down is general, i. would lose in importance, ii. could be easily over-ruled, though it might mean higher pay for the drivers, and iii. could be counteracted by suggestions under para.14.

17. One way of implementing a slowing down policy would be the splitting up of the route into four sections of five days each. Appendix B. shows one possible way of doing this. The present-day cattle patrols could then be empowered to check the passes of the cattle drivers to see whether they have been keeping within the time limits set down, and fines or compulsory delays could be imposed on those who have been speeding within any one stretch. The additional work involved would require a small increase in the personnel of the cattle patrols.

Transit Taxes.

18. An additional suggestion which might diminish some of the friction which still seems to survive between the French cattle owners and their drivers, and the local authorities in the Northern Territories, would be the consolidation of all the local transit taxes into one single tax payable per head of cattle at Mogonori (or Pusiga or Tumu), no other tax of any kind being allowed anywhere else on the journey. For any cattle lost en route the owners could claim reimbursement of the tax at Prang. As almost all the cattle now entering at Mogonori seem to be intended for the market at Prang, this consolidated tax should be a fair arrangement. At the end of every month, the taxes would be paid into the local authorities' Treasuries according to their percentage share, and after deductions had been made for reimbursements during the previous month.

A slaughter scheme in the Northern Territories.

19. Another way of conteracting losses en route, which has been suggested, is to establish a fattening and slaughter scheme in the Northern Territories, for the cattle in transit, with transport, possibly by air, of the refrigerated meat to the consuming centres in the south. The transport of cattle on the hoof is evidently much cheaper per head than the transport of carcase meat by air. The advantage of the scheme would not therefore reside in lower transport costs, but in:

- The avoidance of losses, in numbers and weight, which are due to the long and difficult journey, and in

- The profits to be derived from fattening cattle on cheap and easily available Northern Territories' land.

20. It is difficult to forecast accurately whether such a scheme would be a profitable enterprise or not. This would depend as much on its management as on other more easily calculable economic factors. I feel therefore that if it should be attempted, this should definitely be done, to start with, on an experimental and provisional basis, with the minimum amount of capital investment. This point of view is strengthened when we consider roughly the basic economic problems involved.

21. Once the scheme is started, there are two possibilities:

- The scheme might be unprofitable. If so, it should be possible to wind it up without heavy losses in invested capital.

- The scheme might be profitable. The profits, (as can be seen from above), would derive from the prevention of further losses in transit, and from the fattening up of the cattle to their original condition. From both points of view, a similar scheme set up in French territory would have a definite advantage over any such scheme in the Northern Territories, because it would start much earlier to avoid losses on the road, and would thus make the fattening of the cattle easier, and possibly almost unnecessary.

22. Thus a profitable scheme of slaughter and air transport, started in the Northern Territories, on the basis of imported French cattle could very well induce, sooner or later, the setting up by commercial or other interests, of similar, and even more profitable, schemes in French territory. This would necessarily lead both to the availability of cheaper meat to the consumers than that which can be produced in the Northern Territories and to a decrease of supplies of cattle on the hoof to the Gold Coast. These two facts would probably be sufficient to jeopardize our own scheme of slaughter and air transport.

Present-day developments in French territory.

23. There are indications that the problems raised by slaughter house developments in French territory may be more immediate than is generally realised. Calculations similar to those made in connection with slaughter houses in the Northern Territories have been also made independently in French territories, and as a result abattoirs are already being built in the Upper Volta, the Sudan and the Niger provinces. Certain commercial projects first put forward in detail last February would involve, if they were to be implemented in their entirety, the absorption of all the surplus cattle in the Upper Volta and the Sudan. Commercial development plans are not necessarily always completely implemented, nor is it easily possible to-day with the existing world shortage of men and materials, to keep to a definite time-schedule. Cattle may therefore still continue to come through from French territory in sufficient numbers for our needs. Nevertheless it is important that developments in French territories should be closely watched, possibly through regular visits by the appropriate officers.

24. If the commercial projects, mentioned above, should, on the other hand, be realised in their entirety, a new situation would

face not only the Northern Territories, but the Gold Coast as a whole, as such projects would imply a disappearance of the now existing export surplus of live cattle from the French territories involved. New measures might, in such a case, have to be decided upon to ensure the supply of meat to the Gold Coast. A committee of the various departments concerned might have to be set up to discuss the implications of such a new situation and the measures to be taken.

I have forwarded to the proper authorities both a summary of the commercial projects mentioned above and my views on the problems which could be raised by a full implementation of such projects.

SOME OBSTACLES TO DEVELOPMENT.

25. The most important problem facing the Northern Territories at the moment is a shortage of skilled and of trained people at all levels. This problem applies to the whole of the Gold Coast, but it is even more acute in the north than in the south. Any development plans will always have to take this problem into account, and in a way will have to be built round it.

An analysis of the problem.

Within Departments.

26. The departmental staffs may be roughly divided into two groups:

(a) Persons with administrative and policy making responsibilities. For such persons, the present-day system of careful selection and life appointments, though slow in bringing about an intake of new people, seems to be necessary. It is important that such persons should have both a capacity for initiative, and the opportunity as well as the incentive to make a good study of the special problems of the country they will be working in. Long tenure of office, broad interests, and special capacities for grasping quickly new and varied problems are essential.

27. (b) Persons with specialised technical duties. Such persons, though often highly trained, and sometimes more highly trained than persons in the first group, can be selected in an entirely different manner. They can: i. be taken on for a limited period of time; ii. be chosen only for their specialised knowledge, without reference to the additional qualities necessary for persons in group (a).

28. On the other hand, it is especially for such persons (group b.) that the need seems to be greater now than in the past. A system by which the heads of departments concerned were given wide powers for selecting and appointing technicians on limited contracts should be worth investigating. It would do much to overcome present-day delays; it would probably lead to a larger number of appointments at a time when speed of decision in making appointments is most important for retaining the services of persons who are in great demand; and it would enable the heads of departments to build up a better integrated team.

29. The only argument against such facilities for heads of departments could be that it might lead to wrong appointments due to insufficient checking. I believe that such an argument

would imply an unwarranted lack of trust in the judgement of the heads of departments; they are not only men who have shown themselves capable to rise to a high position, but it is also in their own interest that their department should be run as efficiently as possible.

Repair and Maintenance.

30. This question is closely connected with all attempts at industrialization. Machinery of every description, from vehicles to tractors, mills and factory equipment is or will be coming into increasing use throughout the Northern Territories, but nowhere is there a really efficient and well developed maintenance, spare parts and repair centre. It is important to create one. To do so, I believe there is need for concentrating all the technical resources, which are not unavoidably bound up with certain localities, in one single point. Neither the present-day needs, nor the resources, of the Northern Territories would be sufficient to enable the creation of more than one such centre.

31. The most obvious emplacement would be in the future economic centre of the Territories. Unfortunately it is at present difficult to tell where that centre will be. The northern end of the future Volta lake is one possibility. Damongo which, from an economic point of view will probably be, for an appreciable number of years, the effective rail-head for the Northern Territories railway, could be another. Other future emplacements could similarly be guessed at. Fortunately our need is a present-day need. I suggest therefore that as Tamale is already, though only in a rudimentary way, a technical and repair centre, and is, moreover, also the administrative centre and the best centre of communications in the north, all further developments of a technical kind should as much as possible be concentrated there. This should apply not only to workshops, but also to factories and similar projects.

32. Such a decision of principle will not be easy to take because of a strong local desire for the technical and industrial development of various other centres, such as Bawku and Wa, to mention only two. But I feel that such dispersion of efforts could only leave the Northern Territories as a whole still basically dependent on the south from a technical point of view. Only a concentration in one single point such as suggested above could at present gather together enough technical skill to make the north at least partly independent of the distant Kumasi, and give some encouragement for the creation by private enterprise of new technical ventures, which have to rely on a properly equipped repair and maintenance centre.

Teaching of production techniques.

33. Studies of the best ways of imparting additional practical knowledge to the Northern Territories' population are already being carried out (though they may be called by various names) by most of the departments, from Agriculture to Social Welfare, and from Rural Water Supplies to the Gonja Development Company, to name only a few. Such studies are among the most important contributions to the development of the country, though it would be difficult to discuss them at this stage in economic terms.

34. I have been very glad to see that such work has often been undertaken in close co-operation between two or more departments, and if I may be allowed to put forward my views

as an outsider, I should like to express my hope that such co-operation will steadily increase, to enable a continuous exchange of opinions and experience between the officers in the field. Though technical problems might differ from department to department, the basic "material" on which and for whose sake the work is being done - the population of the Northern Territories - is the same for all. The inter-departmental teams which I have seen doing most efficient work in the field may be able to bring about in many cases better results than those which could be hoped for from the activities of one single department working in isolation.

REGIONAL ECONOMIC PLANNING.

35. Most of the economic problems facing the Northern Territories differ from those in the south either in the methods to be applied for their solution or in their relative importance. Problems of communication, crops and animal husbandry, land ownership, health, and others, though they evidently occur throughout the Gold Coast each has a different content in the Northern Territories. As a result, the problem of economic development in the north must follow lines of its own, worked out on their own merits.

36. This does not mean that there is no connection between the economies of the Northern Territories and of the south. On the contrary: the more the regions differ economically, the more intensive their economic relations will become, and the more integrated their economies will be. A cocoa farmer has little to sell to another cocoa farmer, but many things can profitably change hands between the agricultural and cattle raising north and the mining and cash-crop growing south.

37. The special economic character of the north within the Gold Coast has always been, openly or tacitly, accepted. As a result, both the administration in the north and the Northern Territories sections of individual departments have, I believe, been allowed more initiative than in the rest of the country.

Good use has been made of this greater freedom both for experimenting with new methods appropriate to the Northern Territories conditions, and for inter-departmental co-operation at a regional level, co-operation which extends to almost all departments.

38. I feel that greater facilities should all the same be extended, by agreement with the central authorities, for a more basic kind of planning at a regional level. The activity of almost every single economically important department in the north is closely related to that of the others, more obviously so than in other parts of the country. Water supplies are important for agriculture and animal husbandry as well as for health and for town and country development. Communications affect every single other activity. Industrial development will have to be closely related to the raw materials available and to the general needs for a central pool of technical skill and equipment.

39. The sums allocated for development in the Northern Territories (sums which, as is well known, are coming mainly from revenue raised in the south), though large, are evidently limited. Though the more immediate limitation on the development programme is to-day set by lack of technicians, machinery and supplies, the long-range limiting factor will still be finance. It might be of importance if the allocation of such

finance between different departments as well as between different projects were to be done for the Northern Territories not as from Accra, but again at a regional level, though evidently following consultations on major issues with the central authorities.

40. Three practical results are to be hoped for from this arrangement:

(a) The Northern Territories as well as the Gold Coast as a whole would have a much clearer idea of the amount allocated to the Northern Territories for development purposes. This should help to increase the mutual understanding between the north and the south.

41. (b) The development plans could be drafted as a co-operative effort of the regional branches of the departments involved. (This would evidently have to be done in close consultation on major issues with the heads of the respective departments in Accra.) This arrangement might work especially well in the Northern Territories, not only because the regional staff naturally have the best knowledge of local conditions and problems, but also because they are closely integrated and used to both formal and informal inter-departmental co-operation. If allowed to work out a common plan, they would be in a position to do so efficiently. The Central Land Utilization Committee, which is working along similar lines, is already showing the possibilities of such an arrangement.

42. (c) At the regional level it would be possible to decide on priorities as between departments and as between projects for the region as a whole, and fit all departmental plans and activities, by common consent, into a general plan. This would both give a much greater sense of direction to the departmental activities in the region, each department falling naturally into its proper place within the general scheme, and would necessarily result in the most favourable distribution of resources for the region. It must not be forgotten that the Northern Territories will have to rely for any major development works, both industrial and agricultural, almost entirely on public departments. Private capital and enterprise will unfortunately not be able to play a comparable role for many years to come.

43. I should not like, at this stage, to attempt any indication of development priorities. This should be a task for the trained staffs of the departments, possibly with outside expert help. Any decisions ought to be taken by the organizations which will have to carry them out. The summary discussion below of one such priority should therefore be taken simply as an example of the kind of planning I have in mind.

44. The Government has decided that the projected railway from Kumasi via Damongo to Navrongo or Bawku should have high priority. The building of the railway would involve the expenditure of some £7 million. Its purpose would be two-fold: to provide a reliable and permanent backbone for the system of communications in the region; and to help in developing a large and potentially rich, but to-day abandoned, territory.

45. If some £7 million are to be spent during the next few years with these aims in view, it is important that all efforts should be concentrated to ensure their attainment. If not, the Northern Territories Railway might become not an asset but a heavy liability.

46. A study of possible transversal future communication lines to act as feeders to the railway ought therefore to be made. Public Works Department development plans, while keeping in mind future agricultural and other developments in the various districts, should be drawn up mainly so as to fit in with the railway.

47. Even more important, all efforts should be concentrated on developing the "middle section", through which the railway will be passing, to make of the railway a profitable enterprise at the earliest possible moment. Such development would need land, men and tools.

48. The land is available in a rough form. It must be changed into useful land. This would involve the study of a possible speeding up of the Gonja Development Company's work, speeding which might be a difficult and possibly risky enterprise. It would also involve studies of other approaches to the problems of the "middle section", such as tse-tse clearance in the Sissili-Kulpawn region and the possibility of cattle ranching there. This would naturally lead to the study of additional problems like that of adequate water supplies. The general result would be some diversion of personnel from other jobs and possibly an increase in the temporary staff of certain departments.

49. The men will have to move in from all over the Northern Territories, involving possibly a large percentage of the total population. Such large scale movements will raise problems both in the districts from which the people will be migrating and in the localities of ultimate settlement. It would, for example, diminish local rates but also give a good deal of help to the problem of over-population in the Mamprusi-Frafra region. The impact on local authorities of such changes will have to be weighed against the gain to the region as a whole.

50. The tools will mainly involve, during the first stages of the drawing up of the plan, questions of cost and availability. When the plan comes into effect, the problems of spare parts, maintenance and repair facilities will also have to be taken into account.

51. Whatever the development priorities finally decided upon, and whether they involve one such major item of expenditure as the railway, or a combination of smaller projects, I believe that plans drafted on a regional basis would, for the reasons stated above, make a real contribution to a speedier and more homogeneous development of the Northern Territories.

THE GONJA DEVELOPMENT COMPANY.

52. It is too early yet to make an economic report on the problems facing the Gonja Development Company. Its work is pioneer work, and its own reports and the comments of the Regional Officer are the best exposition of its development so far. There is one single point which I should like to mention: it is the problem of the initial cost of land clearance.

53. I entirely agree with the point of view that the cost of land clearance should not be made to enter the annual income and expenditure accounts of the Company, but should be considered as a once and for all payment of a capital nature for the purpose of developing the country. All the same, sums to be spent under that heading, amounting at present to £10 an acre,

will be very large. It might be as well if they could be translated into ordinary accounting terms, to enable us to get some idea of the general profitability or non-profitability of the development project.

54. On the basis of 20 years amortization, at 4% rate of interest, the £10 per acre could be repaid through an annual payment, over 20 years, of less than 15/- per acre.

55. The Company's scheme, at present, is that, in payment for the current work done every year by the Company on each farm, some 60% of the farm's yearly output will revert to the Company and the farmer will receive the remaining 40% as his share. (This arrangement varies from crop to crop.)

56. The average size of a farm on Company land is of some 30 acres. 30 acres at just under 15/- per acre amounts to some £22 a year. If the 40% share of the farmer were thus about £22 greater than his previous output in, say, FraFra districts, he would be increasing the country's output sufficiently to make up, at the above mentioned rates of interest and amortization, for the money sunk, by the country, in land clearance.

57. It will take a few years before it will be possible to know with fair accuracy the average annual output per acre on Company land. So far we have only provisional data. If these data should prove reliable, they would indicate that the money sunk in land clearance yields an economic return to the country even under the very strict conditions of high interest rates and relatively short repayment period set by me above. A periodic review of such calculations would, all the same, be desirable.

APPENDIX "A".

Experimental data concerning losses of cattle in transit.

58. Various suggestions have been put forward in the past for avoiding or making good the losses in weight and numbers incurred by cattle in transit. Before attempting to analyse the validity of the suggestions, I tried to get data concerning the actual extent of the losses. Though certain estimates have been made in the past of the percentage of cattle lost in transit through accident or disease, as well as of losses in weight, no facilities of personnel or equipment have been made available in the Gold Coast for reliable investigations into such losses.

59. The simplest method for investigating losses in weight would be to instal a weighing bridge at Mogonori and one at Prang. Sample herds of cattle amounting to, say, 100 head a month could then be weighed at Mogonori, marked, and weighed again at Prang. It would thus be possible to estimate statistically the average losses both in numbers and weight, month by month, and correlate them with variations in rainfall or any other factors which might influence the weight and condition of cattle. Similar experiments could also be undertaken between Prang and Kumasi, Sekondi and Accra.

60. As it would have taken rather long to install such weighing bridges, even if funds had been made available immediately, I tried to find out whether data concerning the loss in weight of cattle travelling under similar circumstances were not available outside the Gold Coast. During my stay in Dakar in July, 1951, I discussed these problems with M. Mornet, head of the

Research Department in Animal Husbandry for French West Africa. I mentioned to him my need for data concerning loss of weight in French cattle in transit through the Northern Territories. I was lucky enough to get from him such data relating to an experiment undertaken in 1950-1951 by the Department of Animal Husbandry in French West Africa, data which I later put at the disposal of the Department of Animal Health in Accra.

61. Following our discussions, he also suggested to the French West African Authorities that the experiment of 1950-1951, mentioned above, might be usefully repeated on the Tougan-Prang route. The results of this second experiment, which was undertaken in 1951-1952 with the co-operation of the Gold Coast Animal Health Department, have not yet been worked out. The experiment, made on the model of that of 1950-1951, covered, besides measurements of losses in weight, also the effects of anti-trypanosome drugs.

62. The final results of the experiment should be useful for the formulation of future policies both for the prevention of sleeping sickness (which was the main concern of the organisers) and against losses in weight; but they would not diminish the value of a month by month weighing experiment, as outlined above, between Mogonori and Prang and, possibly, places further south.

APPENDIX "B".

63. Suggested daily travelling stages for cattle in transit between Mogonori and Prang.

Days	Miles	Places	Comments
1st	12 11	Mogonori-Zabugu Zabugu-Garu	Cattle are rested after nine days' quarantine and seem able to travel the 23 miles in one stretch without difficulty.
2nd	13	Garu-Shishie	At present all cattle stop at Shishie to rest before the scarp. Cattle leaving Mogonori late may stop at Zabugu, and travel from there to Shishie in one day.
3rd	11	Shishie-Sakogu	Sakogu is on the top of the hill and at present all cattle stop to rest.
4th	8	Sakogu to Nagbogo	A short journey as cattle are usually tired after the scarp. If water supplies are very bad, cattle might go to Bongo Da instead. If the cattle are in good form, they may go as far as Jawini.
5th	19	Nagbogo-Bagale	
6th	12	Bagale to Sakulo	There is always water in the Nasia.
7th	19	Sakulo-Kpatinga	This stage is rather long and cattle often stop before reaching Kpatinga.

Days	Miles	Places	Comments
8th	14	Kpatinga-Sekpe	Water supplies at Sekpe are poor. Cattle often have to be driven straight across to Sang for watering, giving a very tiring journey of 28 miles in one day.
9th	14	Sekpe-Sang	The streams on the way to Sang often dry out, but immediately south of Sang there is a good water hole in the river bed (complete with fish and crocodiles). This hole is possibly the remains of a biliga.
10th	11	Sang-Kpabia	Water on the road is good.
11th	13	Kpabia-Ningboyile	At present most drivers take their cattle at least as far as Sanku which is another four miles further on and usually to Bentripe, six miles beyond Sanku. Some may even go as far as Wangasi-Turu. I suggest that as water is usually plentiful and feeding not too bad, the cattle should be allowed to recuperate from the previous days' hard travelling by breaking the journey up as indicated under days 11, 12, and 13. The area between Kpabia and Dagonkade becomes marshy when it rains and some cattle get stuck in the mud. I could not find any useful suggestions so far for dealing with this problem.
12th	10	Ningboyile-Bentripe	
13th	11	Bentripe-Wangasi Turu (Garin Turu)	
14th	13	Wangasi Turu (Garin Turu)-Dagonkade	
15th	12	Dagonkade-Salaga	
16th	10	Salaga-Mericho	
17th	8	Mericho-Makongo	At present the journey from Salaga to Makongo is usually made in one day. As the Volta has to be crossed at Yeji the day after, a more leisurely pace would help to keep the cattle in good condition for the strenuous swim ahead.
18th	8	Makongo-Yeji Village (No. 1).	The crossing of the river is necessarily slowing up the journey that day.
19th 20th	24	Yeji-Prang	Water supplies are about half way between Yeji and Prang and a few miles off the road. The journey thus divides itself naturally into Yeji to water point, and water point to Prang.

64. I am suggesting a rather long stage for the first day. This will allow most drivers to fall behind the time schedule, and thus to keep more easily within the time limits set. I envisage the checks as taking place at Bagale, Kpabia and Salaga, or the nearest station either way. The drivers would be allowed a certain latitude, (say about one day), in their driving schedule. At each check point, the number of days would be counted as from the date of departure from Mogonori.

65. The Tumu route, which was officially opened last year, could be very useful for taking some of the strain on the grazing off the Mogonori route. This could be done either by diverting a fair number of cattle from the Mogonori route, or by switching all the cattle from one to the other for half the main cattle-transit period. Cattle might thus be allowed to pass through Tumu between November and the middle (or the beginning) of January and through Mogonori for the rest of the time. The choice would have to be dictated by the normal state of the water supplies on the two routes during the later stages of the dry season.

SOCIAL AND ECONOMIC SURVEY OF A FISHING COMMUNITY, BENTSIR ASAFO, CAPE COAST.

1953

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PREFACE

SOCIAL AND ECONOMIC SURVEY OF A FISHING COMMUNITY, BENTSIR ASAFO, CAPE COAST.

The following survey was undertaken at the request of the Ministry of Local Government and Housing, during the months of May, June and July, 1953. While the main investigation took place in July and took one week, I paid five other visits of varying periods to the area, three before and two after the survey. The work of interviewing was done by untrained investigators: students of the University College of the Gold Coast and of the Kumasi College of Technology, all of whom were Fante and resident in Cape Coast. I would like to thank them as well as Mr. N. O. Quarmyne and Mr. A. F. Wiafe of the clerical staff of the University College, for their tact, perseverence and enthusiastic co-operation; I owe special thanks to Mr. P. A. Dsane for his advice on Fante social customs, and to the Accra, Cape Coast and Winneba Lighterage Managers of the United Africa Company Limited and Messrs. Elder Dempster Lines Limited, for providing me with information concerning boat-boys.

The statistical analysis of the questionnaires was undertaken by the Government Statistician's Office. Were it not for them, and especially for the keen interest Mr. Booker and Mr. Prevett of that Office took in this investigation, the most interesting parts of the survey might have been impossible to attempt.

Finally I wish to express my thanks to Mr. W. B. Birmingham and to Mr. B. M. Niculescu of the University College for their advice and encouragement through all the stages of planning, execution and writing of this survey.

The funds for the field-work were provided by the Ministry of Local Government and Housing.

E. R. Rado
Economic Research Division
University College of the Gold Coast.

Achimota.
March 12th, 1954.

REPORT ON THE SOCIAL AND ECONOMIC SURVEY OF BENTSIR QUARTERS, CAPE COAST.

The following paper incorporates the results of a social and economic survey of Ward B, house numbers 26/3 to 97/3 of Cape Coast, commonly known as Bentsir quarters, and largely inhabited by members of No. 1 Asafo Company. The aim of the survey was to throw light on problems of slum clearance, rehousing and resettlement, in case it should be decided to go ahead with the building of the proposed Post Office and Telephone Exchange for which the site would be required.

The area surveyed lies opposite Cape Coast Castle and occupies some 3.6 acres. All but nine of the houses are built of swish, four are swish and cement mixture and the rest are board or stone. Only twenty-three houses were single story; 41 had two stories and four houses had three: a measure of the lack of opportunity to expand outwards; multi-story houses being quite uncommon in a traditional fishing village.

Many of the houses were alleged to be over fifty year old; most showed signs of age and rain damage. This is hardly surprising, as the flat, swish roofs which all of the houses had are calculated to trap the rain and weaken the walls and ceilings.

The population of the area (i.e. the number of people sleeping in the houses concerned at the time of the survey), was found to be 1,980. This figure agrees with an estimate of 1,983 prepared from the health-cards of Mr. Price-Jones, the Sanitary Superintendent of Cape Coast, which were filled in in 1949/50, but it is over twice as much as the figure of 952 prepared from the 1948 Census returns for the same area.+ Without entering into a detailed explanation of the discrepancy a guess might be hazarded that the low Census figure may be accounted for by political unrest in Cape Coast at the time of the count.

2. Sanitation facilities.

Of the 67 houses 23 had a bath or catchpit - an enclosed space with a soakaway - three houses having two, catering for 557 persons or about a quarter of the population. Only 13 houses had latrines - one house having two - catering for 330 persons or a sixth of the population. The rest use the beach or public lavatories, though this is not universal: several references have been found in the Sanitary Superintendent's cards to fines levied for human excrement having been found within the precincts of a house. There are only two water-points serving the whole area, one of which is shared with Nkum, a neighbouring area on the other side of Chapel Street.

3. Overcrowding.

A room was defined as an enclosed, roofed space with an entrance. 522 such rooms were counted, 509 being used as sleeping accommodation. This compares with an estimate of 570 in the Census and 578 by the Sanitary Superintendent. The difference is due to many of the rooms having collapsed after the rains between 1948-1953. (See below). The distribution of population within the rooms was as follows:

No. of persons per room	No. of Rooms	Total No. of Persons	Rooms %	Persons %	Persons per room %
1	120	120	40	14.5	1.4
2	84	168			
3	78	234	60	85.5	5.5
4	62	248			
5-9	138	855			
10 & over	27	351			
	509	1980			

The average density is 3.9 persons per room, the national average (1948 Census) being 2.2. Taking three persons per room as the "overcrowding line", 85% of the population, occupying 60% of the rooms, live at a density of 5.5 persons per room, over two and a half times the national average, and more than a sixth of the population live more than ten to a room. ++

Another means of measuring overcrowding is by the surface area occupied per person. Estimates of the surface area of each room which was used for sleeping were made during the survey; the total surface area was found to be approximately 65,750 sq. ft., averaging about 33 sq. ft. per person. Only 422 persons or 21% of the population, had the national requirement of 36 sq. ft. or more (cf. Table 2).

The figures quoted above reveal a state of dire overcrowding. Apart from the gross discomfort which it means to the inhabitants of Bentsir quarters, overcrowding and the lack of proper sanitary facilities are a constant danger to public health and provide favourable conditions for the dissemination of every kind of infectious disease.

Moreover, this state of affairs has recently been getting worse. No building or repairs have been permitted in the area since it has been scheduled for slum clearance, while rain damage has steadily been reducing the number of rooms available for human habitation. Houses 27/3, 37/3, 46/3, 53/3, 67/3 and 68/3 have been so affected, and the damage may well be more extensive since the last rains.

Some of the people who have been made homeless have moved out of the area into temporary lodgings elsewhere, others sleep in the streets outside. They still spend the day in the family house, returning to their lodgings at night. Were new houses to be built, they would claim an equal right to them with the present inhabitants of Bentsir, a right that would be valid, as all the houses in Bentsir are family property. This means that when resettlement is considered, instead of some 1,980 some 2,100 persons should be catered for. On the basis of housing at an average density of 2.5 persons per room, which is the agreed Public Works Department standard, the 1,688 persons, who now live at more than three persons per room, and the approximately 200 who have no rooms at all, at least another 355 rooms should be provided in addition to the 509 already existing. (But see below.)

4. Family Structure and Rehousing.

A careful analysis of the distribution of sexes classified by marital status in three types of rooms: adult male; women and children; and mixed rooms, in which adults of both sexes as well as children are present (Tables 1(b), 1(c) and 1(a), provides indications of the present social pattern of housing, which should be given careful attention when deciding on the number and types of rooms that will be required if a rehousing scheme is attempted.

+ I am grateful to Mr. Dowden, lately of the Government Statistician's Office, for providing me with the Census returns which refer to the area under survey.

++ According to the Census figures only 188 persons, or about 20% of the population as counted in the Census, were living at more than 2.5 persons per room. The difference is partly due to the very much lower number of persons the Census estimated to live in the area, but partly also to the fact that the Census counted people on a house by house, not a room by room basis, thus some of the overcrowding within a house was already averaged out.

The results of extensive questioning by myself and by my assistants have indicated that, wherever possible, a married man will share his room with his wife and her children; if he has several wives they take it in turn to live with him; and if his wife stays with her mother from choice, he will try to have a room by himself. This argument is supported by the remarkably close correlation (cf. Table 1(a), Cols. 3, 4, 5), between the number of "mixed" rooms in each row and the number of married, divorced and widowed men and married divorced widowed women living in them.+ The correlation is most evident in rooms with less than ten persons per room. This group comprises 94% of the "mixed" rooms, with 200 married, divorced, widowed men and 210 married, divorced and widowed women. Only in the most overcrowded rooms, with ten persons or more per room, where necessity upsets natural alignments, does this pattern break down. In a few cases "mixed" rooms may be made up of adult men and girls under 15 - presumably their daughters - living together, but there is no reason to believe that the correlation mentioned above is fortuitous.

Some conclusions may also be drawn from the above arguments about the pattern of housing of married women (grouped in Table 1 with those widowed and divorced). The aim is for every married woman and her children to live in the husband's room (though previously it used to be customary for her to stay in her mother's house). It is not the custom for a married woman to stay in her husband's house but not share his room with him, as happens among the Ga.

If we assume that Table 1(a) represents predominantly married couple's rooms - who share their room with their small children and often with their unmarried sons and daughters - it will be seen, (cf. Table 1(a), Col. 6, and Table 1(c), Col. 4) that probably a little less than half the married women are to living with their husbands. The rest will be sharing rooms with their children and with other married women in a similar position.

Single women of marriageable age are few. Fifty-four per cent of them are under 21 years of age, and even in the 16-20 group they barely exceed two-fifths of the total (cf. Table 4). They very rarely have a room of their own, as it is considered detrimental to a girl's reputation if before marriage she does not sleep with her parents or with responsible female relations. More than two-thirds of them are in all-female rooms, probably with their mothers or aunts, the rest are in the "married" rooms; again, I assume with parents or relations (Table 1(c), Col. 5, 1(a), Col. 7).

The single males are almost equally divided between those living in "mixed" rooms, and those in rooms inhabited by adult males only. (cf. Tables 1(a) and 1(b). From my own observations it appears that those living in mixed rooms are either younger sons, nephews or brothers of the head of that room, mostly between 16-20 years of age. The rest are older, or more distant relatives. It seems that, were it not for lack of space, almost all the single men would either be living alone, or with other single men, or with married men whose wives live elsewhere.

There are some aspects of the marital structure of the population (cf. Tables 4(a) and 4(b), which are clearly relevant to any suggestions one might make concerning rehousing. Women marry considerably younger than men. Fifty-eight percent of women are married between 16-20 and 90% of them are married between 21-30. During the period following adolescence they live with their parents or close relations, and by the time they are old enough to require separate housing accommodation there are hardly any of them left unmarried, certainly not enough to constitute a housing problem.

+ The theoretical possibility of married men sharing rooms with married women who are not their wives can be discounted.

The position is very different with men. Ninety percent of the 16-20 group is single, thirty percent of the 21-30 group, and the unmarried proportion is still as high as 17% when one gets to the next group: 31-40. Single men will be a sizeable group to bear in mind when deciding on the number of rooms that will be required.

The figures relating to fertility (Table 4(b), Col. 6) refer to children alive, not to children born. While they are unsuitable for the calculation of birth-rates or fertility-rates, they are suggestive of other things. In the child-bearing age of 16-50 a married woman will have about three children on the average, of whom one in every two seems to be under 15.*

Now if we accept the above suggestion - and just under two "children" per married woman is, if anything, a modest estimate - and add to this the fact that normally the woman and her children will live with the husband, the following picture emerges. Counting on the basis of married men rather than married women (to discount the duplicating effect of polygamy) even on the new site there will be some 340 rooms which will be inhabited by three to four persons, involving about 60% of the population. In other words, to decrease the overcrowding of married people and children the solution is not only more rooms, but bigger ones.

That people in the area are more anxious to distribute themselves in rooms according to family structure rather than the "density" that will result in given striking corroboration in the table relating room sizes to the number of persons living in them (Table 2, Cols. 1 and 7). The number of persons per room shows very little variation between rooms of different sizes. It is found that in the seven sizes of rooms involving 96% of all rooms and 98% of all persons, the average number of persons per room only varies between 3.4 and 4.2 whereas the size of the rooms varies between an average of 55 and 324 sq. feet.

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* From Table 4(b) it seems that, discounting the children who die in infancy, a married woman on the average, has one surviving child every eight years, bearing about four surviving children between the ages of 18 and 42. At any time, therefore, she would have only two "children" (i.e. 15 years or under) less before the age of 25, for by the time the third surviving child arrives the first would pass into the "15 and over adult group".

It is interesting to compare these figures with the fertility investigations carried out in conjunction with the 1948 Census (cf. Gold Coast Census of Population, 1948). The investigation showed that on the average women between the age groups of 15-20 and 40-45 will have one child born every five years. For purposes of comparison with my own figures, the average number of children a woman in the Colony between 15-20 will have born is 3.7, the average number surviving is 2.4, the survival rate being 0.65.

While my figures show a higher number of surviving children per woman (2.9), if one accepts the 65% survival-rate, my theoretical spacing of two children every 16 years is equivalent to one child born every five years which is the clear pattern running through the Census figures.

It is now possible to put forward suggestions about the method of calculating the number of rooms that are required.

(i) One room for each married, widowed, or divorced man. If married, he will be expected to have his wife - and if he has several, the one whose turn it is to stay with him - sleeping in the same room, as well as the wife's children. Calculating on the basis mentioned above (cf. also Table 4(a), we shall need 335 rooms. Assuming that the number of persons sleeping in them will be about four, and that 40 sq. feet per person is the minimum requirement, the rooms should not be less than 12 feet by 14 feet.

(ii) (a) One room for every three widowed and divorced women and married women whose husbands do not live in the same house.

(b) One room for every three unmarried women.

These two groups may, in practice, often amalgamate, and may be counted as one. There will be about 300 married, divorced, widowed and about 100 single women in this group (cf. Table 1(c) and 1(a). This requires about 135 rooms of not less than 10 feet by 12 feet.

(iii) One room for every two single men of 15 and over. (I am suggesting two rather than three here, as a comparison of Tables 1(b) and 1(c) suggests that single men are accustomed to greater privacy than any other group in the community.) These rooms should be large enough to be turned into married rooms if the necessity arises. For the 218 single men I am suggesting 110 rooms of 10 feet by 12 feet.

(iv) For the 150-200 persons whose homes have been destroyed by rain (about whose marital structure I have no information), I would provisionally suggest 75 rooms of 10 feet by 12 feet. The precise number that will be required will have to be ascertained later, if it is decided to go forward with scheme.

On the basis of these calculations about 655 rooms would be needed, an expansion of 28.5%, while the floor-space, this would necessitate is about 94,600 sq. feet or 44% more than at present. (This, incidentally, compares with about 840 rooms and 84,000 sq. feet if one calculates on the "mechanical" criterion of 2.5 persons per room and 40 sq. feet per person.)

This is just the bare requirement. One of the most distressing features of the overcrowding, which results in children sharing their parents' rooms until they are 15-16, and often even later, is that their sleep is constantly disturbed by the conversation and in-and-outgoings of the adults. I would strongly urge the erection, adjoining each of the "married" rooms, of a small room, not more than 8 feet by 10 feet, for children between 6 and 14, which school-children could use for home-work and all of them for undisturbed sleep. If necessary, the additional cost of these rooms could partly be met by reducing the size of married couples rooms from 12 feet by 14 feet to 12 feet by 10 feet.

These suggestions have been put forward taking into account the funds that may be forthcoming for a resettlement scheme, as well as the existing social pattern of housing in the area. Were it not for shortage of funds, the ideal solution would, no doubt, be one room for each adult and one for every two children.

5. Resettlement.

With lanes in the area often less than 4 feet wide, and the neighbourhood of Bentsir equally closely built up, to resettle the people in the same area and reduce the density of population would be impossible unless the building of four-storey blocks were to be undertaken. It is beyond the financial capacity of most of the inhabitants to pay an economic rent for such a type of house. An alternative suggestion has been to move the people from Bentsir about three and a half miles along the road to Elmina and to grant them land along the beach, stretching some way inland. The disadvantage, which the fishermen were quick to point out, is that this would deprive them of the natural breakwater the harbour at present provides. With methods of fishing as they are, the building of an artificial breakwater would probably be economically unjustified, though there is a prima facie case for investigating the possibility of making Cape Coast harbour capable of anchoring power-driven fishing vessels.

Barring this, there is a great deal to be said for choosing the spot suggested along the Elmina Road. When the Fante peoples moved down from the North in the 17th century, many of those who form the core of Cape Coast first settled between Cape Coast and Elmina, some three to six miles inland. The original headquarters of Bentsir Asafo were a group of villages, centred around the royal village of Amamma, some five miles north-west of the present St. Augustine's College. Some years later a group of these peoples struck out through the bush, reached the coast and settled down in the present area of Bentsir. This offshoot has kept up a close connection with its parent stock inland: even today the authority of the officers of the Asafo Company extends both to the inland and to the coastal section of Bentsir. Many people both from the Cape Coast and the Amamma part of Bentsir have expressed to me the desire for the two sections to be reunited.

The new situation would have the economic advantage of providing the fishermen with agricultural land, the working of which could become a subsidiary occupation during the season when fish are hard to come by; it would also be something to fall back on when Tema is beginning to exercise its economic effects. (See section 6 below.) While I cannot claim to have spoken to everyone whose influence in Bentsir might be important in this connection, it seems that a large part of the population would be willing to move to the new site even without a breakwater, if they had an assurance of improved housing.

In talks I had with Chiefs, Elders and officers of the Asafo Company, I was assured that the people of Bentsir as members of the Asafo - the primary function of which is communal labour - would be willing to provide free labour for the building of their new houses. While they thought that the work of building the new houses could be performed by the Company alone, if it were provided with sufficient timber, I consider such an arrangement would guarantee neither the most economical use of timber nor the erection of houses which could be relied on to last more than twenty years. I, therefore, suggest that, if there is to be rehousing, prototype h o u s e s should be designed, based on the present family compounds. When the design has been approved by the Ministry of Housing and the number of families who would be willing to move determined, the building of the houses should be given out on tender. Some of the expense should be covered by compensation funds the people receive for the requisitioning of their land and the demolition of their houses, while the labour will probably be provided free. If the people are clearly given to understand that it will depend on the provision of sufficient labour whether or not they will have to pay rent, the cost of new building should be greatly reduced.

6. Occupations.

The people of the area are predominantly engaged in the fishing trade. 370 men, 67% of the adult occupied male population, are fishermen or boatboys, usually both; while 403 women, 65% of the adult, occupied female population, are engaged in the buying, selling and smoking of fish. Thus there is more than one woman engaged in the distribution of fish for every man catching it. The main occupations for each sex were as follows:

MEN		WOMEN	
Fisherman/boatboy	370	Buyer/seller/smoker of fish	403
Carpenter	36	Petty trader/hawker	130
Clerk	27	Food seller (not fish)	27
Lorry driver	17	Bread baker	27
Other	92	Seamstress	12
Un-occupied	25	Other	27
		Un-occupied	48
Total	567		675

Looking at Tables 5(a) and 5(b) no very clear trend emerges as to the growing of waning popularity of various occupations. Taking the two most popular, and in some way connected, occupations, fishing and carpentry, there is little difference between the younger generations: 73% of the occupied men 41 and over are engaged in these trades; 75.5% of the 16-40 group. Fishing may not be a very profitable occupation in Cape Coast but there are few alternatives to it. Any movement there is exists not from one occupation to another in Cape Coast, but from Cape Coast to other parts of the country.

Questions were asked during the survey about regular residents who were absent at the time, concerning their present place of residence, present occupations and the annual length of their absence from Bentsir. I do not consider the answers about the length of absence reliable, but the figures (see Table 6) do give an indication of the magnitude and direction of the outflow from Cape Coast.

Besides 250 men who were present at the time of the survey, but regularly go to Accra as boatboys or fishermen, 324 other adult men and women, 27% of the adult population, were mentioned as being considered regular residents in Bentsir but absent at the time, working in other parts of the country for three to nine months a year. The Cape Coast district (outside the town itself), Sekondi/Takoradi, Kumasi, Accra and Tarkwa - in that order - were the most frequent places of alternative residence; clerical work, driving and allied trades, petty trading and food-selling the most frequent occupations. A few went fishing as far as Monrovia. This is more common further West, in Kommanda and beyond, but may gain in importance in a few years' time when Tema harbour is in operation. (See below).

The economic life of the area is based on the sea. The catching, smoking and distribution of fish directly occupies two-thirds of the adult population of both sexes, and to their number one may also add carpenters, much of whose time is spent on the repair of boats, while many lorry-drivers are also concerned in the inland distribution of fish.

While the curing of fish for inland distribution and the selling of fresh, fried and lightly smoked fish for consumption in and around Cape Coast was the only source of income of women engaged in the fishing trade, the catching of fish is economically only of subsidiary importance to over two-thirds of the fishermen. Working as boatboys in Accra and Cape Coast harbours, carrying cargo to and from the ships across the surf, is the main source of income of a large body of

fishermen not only in Cape Coast itself but also in a number of fishing villages stretching from Ekumpuanu in the West to Shama in the East. + Each crew of 13 men is paid, in advance, £150 for a contract of 250 laden trips; total payments by the two lighterage companies to crews from the Cape Coast area were £150,000 in 1953, of which about £10,000 was for work in Cape Coast harbour and the rest for work in Accra. Assuming that each fisherman works three to four contracts a year - according to the estimate of the Chief Recruiting Agents - the number of persons involved in this trade is around 4,000 while their average annual income from boat-work is about £40 a head. The three to four contracts will take anything between three to six months; it is estimated by the Chief Recruiting Agents that during the rest of the year a boatboy will earn another £20 from fishing. It is considered unlikely that they could earn more than about £40 in an average year even if they spent the whole of their time fishing, as during the July-August herring season when the bulk of the annual catch is landed most of the boatboys do, in fact, stay in their own villages. The income derived from boat-work in the harbours is, therefore, the backbone of the economic life of Fante coastal villages; made more important still by the notorious fluctuations of the fishing catch: differences of 300% between two years' catches are nothing out of the ordinary (cf. Report on Gold Coast Fisheries Development, 1949, para. 3).

When Tema harbour is completed ships will be able to load and unload alongside the quays and the need for surf-boats and boatboys will disappear. If no action is taken to counteract its effects, the opening of Tema harbour for private commercial use in 1959 will spell economic disaster all along the Fante coast. Such development was sooner or later inevitable: when the flow of imports is steady and regular throughout the year and exports are steadily becoming more so, dependence on casual seasonal labour becomes an anachronism, causing costly delays in the turn-round of boats in the fishing season when boat-crews are hard to get.

Tema will not only destroy old jobs: it will also create new ones. There will be a need for stevedores and dockworkers of all kinds, though probably very much less in number than in Accra; mechanical handling is bound to be labour-saving. Without claiming to have investigated the matter in any detail, it seems improbable that fishermen will change over from the surf-boats to dock work. The fact that at present almost all the dock work is done by Kruboys, even in Cape Coast itself, seems to indicate this, and this was also the impression I derived in conversation with the fishermen themselves. The work would mean having to abandon both fishing and Cape Coast altogether. The latter might be possible: there are numerous settled Fante fishing villages in the Ivory Coast; the former seems unlikely.

Moreover, even if all the dock-workers in Tema were Fante ex-boat-boys, unemployment would still present a serious problem along the Western Coast.

Short of abandoning the area there are few alternative employments in the area; there will be fewer still when the main source of income has dried up. (I can foresee a chronic "balance of payments problem" here.) Two possibilities are worth looking into. One of them is the expansion of the sea-fishing industry through the employment of motor fishing vessels which, being able to fish at greater depths

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+ The villages are Ekumpuanu, Narkwa, Edumafar, Ankaful, Kromantsi, Abadzi, Anomabu, Biriwa, Mouri, Queen Anne's Point, Elmina, Ankwana, Ampeni, Kommenda and Shama, going from West to East.

and cover greater distances following a shoal, might turn fishing into an all-the-year round occupation instead of the severely seasonal one it is at the moment. The second is the creation of inland fisheries on the artificial lake behind the Volta and the possible transplantation of Fante fishermen to its shores. The technical and zoological feasibility of these ideas will be discussed in another paper by someone who knows more about it than I. Whether or not the technical conditions are economically favourable, it seems that, Tema and Takoradi being the only ports capable of mooring motor vessels, even an expansion of sea-fishing could only benefit the area under discussion if its inhabitants were willing to move to one or another of these harbours. Furthermore, if fishing with 50 feet motor-driven vessels became practicable, the landing of large catches would certainly affect the system of distribution which at present works on the basis of about six women selling and curing fish for every five men catching it, and, granting the preference for fresh over smoked fish, the steady landing of fresh fish throughout the year would affect several thousand women whose main source of income is the smoking of fish for inland distribution.

The present method of inland distribution of salt-water fish would be similarly affected by the creation of a perpetually fishable inland lake from Ajena to Yapei. On a lake the motor-boat would not have the same advantages over the hand-rowed boat as it does have at sea; if the project is technically feasible, its economic implications and the social problems of a move of, maybe, several hundred miles should certainly be investigated.

This last section may seem to have been a digression, and, in a sense, so it was. But having argued the sociological case for slum-clearance and rehousing, as economist I could not but see that there were graver problems than overcrowding threatening the people of this area, and that it would be short-sighted to re-settle them at great expense a few miles further west only to find in five years' time that the whole Fante coastal strip has been turned into a slum belt. Once the spectre of Tema entered the picture, it would have been misleading to keep the discussion in terms of Cape Coast town alone. Nevertheless, everything that I have said on this account applies as much to the section of Cape Coast I undertook to investigate as to any other section of the Fante coast. The picture and the problems are the same everywhere and may be called the social reformer's nightmare: what can one do to help those whose livelihood will be taken away, whose way of life altered by technical change which will benefit the rest of the country.

DISTRIBUTION OF THE POPULATION ACCORDING TO ROOM-DENSITY, SEX AND MARITAL STATUS

(a) MIXED ROOMS

1 No. of Persons per room	2 Total No. of Persons	3 No. of Rooms	4 M a l e (Married, Divorced, Widowed)	5 Female (Married, Divorced, Widowed)	6 Male Single	7 Female Single	8 No. of Children
2	92	46	43	37	3	-	9
3	111	37	31	33	8	1	38
4	156	39	33	35	22	2	64
5	160	32	31	35	20	3	71
6	174	29	35	36	20	5	78
7	84	12	11	18	12	-	43
8	40	5	6	6	3	1	24
9	63	7	10	10	7	5	31
10 & over	193	14	31	68	23	12	59
Total	1073	221	231	278	118	29	417

TABLE 1.

DISTRIBUTION OF THE POPULATION ACCORDING TO ROOM-DENSITY, SEX AND MARITAL STATUS.

(b) ALL MALE ROOMS

1 No. of Persons	2 No. of Rooms	3 Total Persons	4 Males Married, Divorced & Widowed	5 Males Single
1	80	80	48	32
2	19	38	24	14
3	13	39	26	13
4	6	24	8	16
5	5	25	9	16
6	2	12	3	9
Total	125	218	118	100

TABLE 1.

DISTRIBUTION OF THE POPULATION ACCORDING TO ROOM-DENSITY, SEX AND MARITAL STATUS

(c) FEMALES & CHILDREN ONLY.

1 No. of Persons	2 No. of Rooms	3 Total Persons	4 Female Married, Divorced & Widowed	5 Female Single	6 Children
1	40	40	29	9	2
2	19	38	18	8	12
3	28	84	48	7	29
4	17	68	22	4	42
5	13	65	32	3	30
6	12	72	29	3	40
7	8	56	27	8	21
8	9	72	32	6	34
9	4	36	8	2	26
10 & over	13	158	61	12	85
Total	163	689	306	62	321

TABLE 2.

DISTRIBUTION OF POPULATION ACCORDING TO SIZE OF ROOMS.

	1 Room Area (sq.feet)	2 No. of Rooms	3 Total Surface Area (Sq. feet)	4 Total No. of Persons	5 Adults	6 Children	7 Sq. feet per person	8 Persons per room
1.	36 & under	4	117	12	8	4	10	3.0
2.	37 - 72	84	4951	324	189	135	15	3.9
3.	73 - 108	185	17206	756	434	322	23	4.1
4.	109 - 144	114	14843	421	276	145	35	3.7
5.	145 - 180	57	9724	241	171	70	40	4.2
6.	181 - 216	17	3413	61	42	19	56	3.6
7.	217 - 252	16	3834	55	41	14	70	3.4
8.	253 - 324	18	5115	74	53	21	69	4.1
9.	325 & over	14	6547	36	28	8	182	2.6
	Total	509	65750	1980	1242	738	33	3.9
	119 & under	296	24866	1203	702	501	20	4.1
	120 & over	213	40884	777	540	237	53	3.6

TABLE 3.

DISTRIBUTION OF POPULATION BY SURFACE-AREA PER PERSON.

1 Sq. feet per person	2 Adults	3 Children	4 No. of Rooms
11 & under	43	25	11
12 - 17	127	103	55
18 - 23	293	199	114
24 - 29	251	189	116
30 - 35	160	70	45
36 - 41	175	85	73
42 - 53	70	31	28
54 - 77	46	15	17
78 - 101	27	8	17
102 & over	50	13	33
Total	1242	738	509

TABLE 4.

MARITAL STATUS OF ADULTS

(a) Males

1 Age Group	2 Married	3 Single	4 Widowed & Divorced	5 No. of Wives	6 No. of Children alive	7 No. of children per Married, Divorced & Widowed Man
16 - 20	14	129	1	13	5	0.3
21 - 30	120	62	-	121	152	1.3
31 - 40	88	18	2	91	271	3.1
41 - 50	54	5	2	70	270	5.0
51 - 60	32	2	5	43	171	4.6
61 & over	27	2	4	47	178	5.7
Total	335	218	14	385	1047	3.0

TABLE 4.

MARITAL STATUS OF ADULTS

(b) Females

1 Age Group	2 Married	3 Single	4 Widowed & Divorced	5 No. of Children alive	6 No. of children per Married, Divorced & Widowed Woman
16 - 20	66	49	1	58	0.9
21 - 30	223	24	3	458	2.0
31 - 40	110	7	5	375	3.3
41 - 50	67	7	15	387	4.7
51 - 60	33	2	15	212	4.4
61 & over	10	2	36	187	4.1
Total	509	91	75	1677	2.9

TABLE 5.

ANALYSIS OF OCCUPATIONS BY AGE

(a) Males

1	2	3	4	5	6	7	8
Age Groups	Occupations						Total
	Fisherman/ Boatboy	Carpenter	Clerk	Lorry Driver	Others	Un-occupied	
16 - 20	84	9	8	3	30	10	144
21 - 30	134	10	9	9	20	2	184
31 - 40	76	5	2	2	19	2	106
41 - 50	42	6	1	3	8	1	61
51 - 60	19	2	5	-	9	3	38
61 & Over	15	4	2	-	6	7	34
Total	370	36	27	17	92	25	567

TABLE 5.

ANALYSIS OF OCCUPATIONS BY AGE.

(b) Females

1	2	3	4	5	6	7	8	9
	Occupations							
Age Groups	Buying/Selling/ Smoking fish	Petty Trader/ Hawker	Food Seller (not fish)	Bread Baker	Seamstress	Others	Un-occupied	Total
16 - 20	59	26	3	2	2	9	15	116
21 - 30	156	53	10	8	4	12	7	250
31 - 40	79	21	8	7	3	1	3	122
41 - 50	58	20	2	3	1	2	3	89
51 - 60	28	8	3	6	1	1	3	50
61 & over	23	2	1	1	1	3	17	48
Total	403	130	27	27	12	28	48	675

TABLE 6.

OCCUPATIONAL ANALYSIS OF PERMANENT RESIDENTS IN THE AREA ABSENT AT THE TIME OF THE SURVEY

1 Present area of residence	2 Fisherman & Boatboy	3 Carpenter	4 Clerk (Book-binder & Printer incld.)	5 Driver, Fitter & Mechanic	6 Mason, Painter & Plumber	7 Students (Male & Female)	8 Petty Trader (Hawker)	9 Food Seller (Any food-stuff except fish)	10 Bread Baker	11 Other Occupations	12 No occupations (Housewives, pensioners, etc.	13 TOTALS
Accra	15	-	5	1	-	5	6	-	-	6	8	46
Ahanta-Nzima (Sekondi/Takoradi)	3	4	13	11	1	2	12	5	3	9	3	66
Cape Coast	6	2	8	2	-	15	7	4	4	21	5	74
Wassaw-Aowin (Tarkwa)	-	-	4	3	-	4	1	2	-	13	1	28
Other Colony Districts	-	-	3	-	-	-	1	-	-	6	2	12
Kumasi	-	4	5	8	3	6	4	2	4	12	13	61
Other Ashanti Districts	-	-	1	2	-	2	2	2	-	5	4	18
Northern Territories	-	2	-	-	-	-	-	-	-	-	2	4
Other West African Countries	3	2	1	3	1	-	1	-	1	1	2	15
Total	27	14	40	30	5	34	34	15	12	75	38	324

The definition of "permanent resident" was those who normally spend three months and more per annum, in one of the houses in the area surveyed. As the length of absence is often irregular, this table should not be taken for more than an indication of the direction and order of magnitude of the flow out of an area of 2,000 persons.

Accra, Cape Coast and Kumasi refer to administrative districts and not only to the towns of that name.

TABLE 7.

ANALYSIS OF EDUCATION BY OCCUPATIONS

(a) Males

1	2 Standard attained									3	4	5
Occupation	1	2	3	4	5	6	7	8^+	9^+	Total No. educated	No. Not educated	Total
Fisherman/Boatboy	4	3	7	2	2	1	1	-	-	20	350	370
Carpenter	5	1	3	1	1	-	5	-	-	16	20	36
Clerk (bookbinder, etc.)	-	-	1	-	2	2	18	3	-	26	1	27
Lorry Driver	2	-	1	2	-	1	1	-	-	7	10	17
Fitter & Mechanic	-	-	1	1	-	-	-	-	1	3	1	4
Mason, Painter & Plumber	1	-	1	-	1	-	-	-	-	3	7	10
Tailor	-	-	-	1	-	1	3	-	-	5	-	5
Student	-	-	-	-	1	2	4	4	-	11	-	11
Farmer	-	-	-	-	-	-	-	-	-	-	3	3
Petty Storekeeper	-	-	-	-	-	-	2	1	-	3	7	10
Labourer	1	-	-	-	-	-	2	-	-	3	9	12
Policeman & Warder	-	-	-	-	-	-	3	-	-	3	1	4
Goldsmith	-	2	-	-	-	-	2	-	-	4	-	4
Herbalist	-	-	-	-	1	-	-	-	-	1	4	5
Nurse & Dispenser	-	-	-	-	-	-	1	-	-	1	-	1
Teacher	-	-	-	-	-	-	-	2	-	2	-	2
Cook & Steward boy	-	-	-	1	-	-	-	-	-	1	1	2
Others	1	-	-	-	-	-	4	1	-	6	13	19
Un-occupied	1	-	1	1	1	1	2	2	1	10	15	25
Total	15	6	15	9	9	8	48	13	2	125	442	567

8^+ = Started Secondary School

9^+ = Completed Secondary School

TABLE 7.

ANALYSIS OF EDUCATION BY OCCUPATIONS

(b) Females

1 Occupation	2 Standard attained									3 Total No. educated	4 No. Not educated	5 Total
	1	2	3	4	5	6	7	8^+	9^+			
Buyer/Seller/Smoker of fish	3	1	-	-	-	-	1	-	-	5	398	403
Petty Trader/Hawker	1	5	2	-	6	2	2	-	-	18	112	130
Food Seller (not fish)	2	-	1	1	-	-	1	-	-	5	22	27
Bread Baker	4	2	-	1	-	-	2	-	-	9	18	27
Student	-	-	-	-	-	1	3	1	1	6	-	6
Seamstress	1	1	1	1	-	-	6	-	-	10	2	12
Servant	-	-	-	-	-	-	-	-	-	-	1	1
Teacher	-	-	-	-	-	-	2	-	-	2	-	2
Nurse/Midwife	-	1	-	-	-	-	3	-	-	4	1	5
Telephone Operator	-	-	-	-	-	-	2	-	-	2	-	2
Others	1	-	-	-	-	-	-	-	-	1	11	12
Un-occupied	-	-	-	1	-	1	6	-	-	8	40	48
Total	12	10	4	4	6	4	28	1	1	70	605	675

8^+ = Started Secondary School
9^+ = Completed Secondary School.

While Table 7 speaks for itself without any comment, it is only fair to point out that of those mentioned in Table 6, all of whom are natives of the area but have been forced by economic necessity to work elsewhere, there is a much higher proportion of people who are likely to have received some sort of education, certainly the two major groups, clerks and lorry-drivers. The area is made to appear more illiterate than it is by the migration of many of its educated members to areas where their work is required.

TABLE 8.

ANALYSIS OF PRESENT OCCUPATIONS BY SUBSIDIARY OCCUPATIONS

(a) MALES.

1 Present Occupation	2 Subsidiary Occupation									3 TOTAL
	None	Fisherman	Boatboy	Carpenter	Mason	Storekeeper	Labourer	Herbalist	Other	
Fisherman	113	-	244	1	1	-	4	-	1	364
Boatboy	6	-	-	-	-	-	-	-	-	6
Carpenter	33	1	-	-	1	-	-	-	1	36
Clerk	27	-	-	-	-	-	-	-	-	27
Driver	15	-	-	2	-	-	-	-	-	17
Fitter & Mechanic	4	-	-	-	-	-	-	-	-	4
Mason, Painter & Plumber	9	1	-	-	-	-	-	-	-	10
Tailor	4	-	-	-	-	1	-	-	-	5
Student	10	1	-	-	-	-	-	-	-	11
Farmer	3	-	-	-	-	-	-	-	-	3
Petty Storekeeper	9	-	-	-	-	-	-	-	1	10
Labourer	9	1	-	-	-	1	-	1	-	12
Policeman & Warder	4	-	-	-	-	-	-	-	-	4
Goldsmith	4	-	-	-	-	-	-	-	-	4
Herbalist	3	1	-	-	-	-	-	-	1	5
Nurse & Dispenser	1	-	-	-	-	-	-	-	-	1
Teacher	2	-	-	-	-	-	-	-	-	2
Cook & Steward	2	-	-	-	-	-	-	-	-	2
Others	19	-	-	-	-	-	-	-	-	19
Total	277	5	244	3	2	2	4	1	4	542

TABLE 8.

ANALYSIS OF PRESENT OCCUPATIONS BY SUBSIDIARY OCCUPATIONS.

(b) FEMALES

1 Present Occupation	2 Subsidiary Occupation							3 TOTAL
	None	Buyer/Seller/ Smoker of fish	Petty Trader	Food Seller	Bread Baker	Seamstress	Other	
Buyer/Seller/Smoker of fish	346	-	26	27	1	-	3	403
Petty Trader	108	13	-	3	2	3	1	130
Food Seller	23	2	-	-	1	1	-	27
Bread Baker	15	1	8	1	-	2	-	27
Student	6	-	-	-	-	-	-	6
Seamstress	5	-	3	1	3	-	-	12
Domestic Servant	1	-	-	-	-	-	-	1
Teacher	2	-	-	-	-	-	-	2
Nurse & Midwife	2	1	-	-	-	2	-	5
Telephone Operator	2	-	-	-	-	-	-	2
Others	7	1	1	-	-	-	3	12
Total	517	18	38	32	7	8	7	627

It is evident from Table 8 that the fishermen's subsidiary occupation of being boatboys is the only alternative occupation of any major importance, among the men. The women's occupational pattern is more fluid as between different kinds of trading, though more than half of those with subsidiary occupations trade in fish: the catching of fish being a highly seasonal occupation, they change over to other forms of trading during the rest of the year.

TABLE 94.

ANALYSIS OF BOAT-OWNERS BY AGE.

MALES

1 Age Groups (Years)	2 Total Persons	3 Total Boats Owned	4 No. of Boats Owned						
			1	2	3	4	5	6	7
16 - 35	37	53	26	6	5	-	-	-	-
36 - 45	25	35	19	4	1	-	1	-	-
46 - 60	20	30	12	7	-	1	-	-	-
61 & Over	12	24	6	4	1	-	-	-	1
Total	94	142	63	21	7	1	1	-	1

FEMALES

1 Age Groups (Years)	2 Total Persons	3 Total Boats Owned	4 No. of Boats Owned						
			1	2	3	4	5	6	7
16 - 35	2	2	2	-	-	-	-	-	-
36 - 45	1	1	1	-	-	-	-	-	-
61 & Over	1	2	-	2	-	-	-	-	-
Total	4	5	3	2	-	-	-	-	-

TABLE 9B

ANALYSIS OF BOAT-OWNERS BY OCCUPATION

M A L E S

1 Occupation	2 Total No. of Persons	3 Total No. of Boats	4 No. of Boats owned						
			1	2	3	4	5	6	7
Un-occupied	1	2	-	1	-	-	-	-	-
Fisherman	89	129	61	19	7	1	1	-	-
Boatboy	2	2	2	-	-	-	-	-	-
Clerk	1	2	-	1	-	-	-	-	-
Others	1	7	-	-	-	-	-	-	1
Total	94	142	63	21	7	1	1	-	1

F E M A L E S.

Buyer/Seller/Smoker of fish	2	2	2	-	-	-	-	-	-
Food Seller (not fish)	1	1	1	-	-	-	-	-	-
Seamstress	1	1	1	-	-	-	-	-	-
Others	1	1	1	-	-	-	-	-	-
Total	5	5	5	-	-	-	-	-	-

APPENDIX 1.

INSTRUCTIONS TO INVESTIGATORS.

SHEET 1.

Question 2: (No. of rooms)

You will find that some rooms are called halls by the inhabitants. You should count any hall a room if there are people sleeping in it. Rooms used as net stores should be counted separately.

Question 3:

Do not ask these questions directly. You will work out the answers by adding up the figures referring to each single room.

Question 4:

The ownership of many houses is impossible to be determined. Only put down the name and residence of the owner, if you find he owns the house in the sense of being able to sell it or rent it.

Question 5:

Write the number of baths and latrines, writing nought ("0") if there are none in the house.

Question 6:

(i) Under the type of shop classify by the things it sells, counting a craftsman's work shop also as a shop. Thus, drug store or petty trader, goldsmith, etc.

(ii) Under owner's residence merely write if he lives in the house in which the shop is. (Write "in" or "out").

(iii) The rent per month refers to the shopkeeper.

(iv) Under "Owner's Residence" write "H" if resident in the house, "A" if in the area surveyed, "E" if elsewhere.

S H E E T 2

Under previous sheet each line represented a house.

Each of the second sheets refers to a room. You assign a number to the room according to how many rooms the house has.

The size of the room you estimate by taking the length and breadth of it with foot steps, e.g. 8' x 12'.

Question 2:

Many ages you will find difficult to estimate. If a person does not know how old he or she is, you have to make the best guess you can.

Question 3: Sex

Write "M" for male, "F" for female.

Question 4: Marital status:

In the first column write "M" for married, "S" for single, "W" for widow(er).

Question 5.

In this question ask if the informant has a husband, or a wife, (ask how many) in other houses. If the husband (wife) lives outside the area under survey, write a letter "A" before the number.

Question 6: Tribe.

We are interested only in the main tribal divisions. Thus "Fante" is enough, no matter to what sub-division of Fante the person belongs.

Question 7:

Under occupation, I want you to write what the person does, not who employs him or her. Thus write carpenter, fitter, driver, accounts clerk, NOT P.W.D.

When a woman is a fish-seller, the following symbols should be used to denote HER:

D.B. - if she buys fish direct from the fishermen on the beach;
I.B. - if she buys the fish from other women;
D.S. - if she sells fish directly on the market;
I.S. - if she sells it to other women who will re-sell it;
Sm. - if the person smokes the fish she buys before selling it.

Question 8: Subsidiary Occupation

Ask: does he/she do anything else besides the occupation just mentioned? e.g. when there is little fishing to be done.

Question 9: Previous Occupation

Ask in each case: has he (she) had another occupation before becoming ..... (whatever the answer to Question 7) but which he has given up altogether?

Questions 10 & 11:

Residence: Ask how many months per year the person concerned spends in the house. If it is more than 9, write "R", standing for permanent resident. If less than 9 months, write down the number of months, the actual span of months, and the place of residence and occupation in the remaining three to nine months; thus Keta - fisherman, Feb-Oct., means that he spends 8 months per annum in the house, the remaining 4 he spends at Keta, fishing, between October and January.

Education. Write down the actual standard, if any, attained. Write "0" for illiterates.

Question 12:

Write down the standard of education reached. "Nought ("0") if illiterate.

Question 13:

Write the type of net owned (adii, tanga, cast net, etc.) and how many of each the person owns; "0" if none owned.

Question 14:

We want to find out where nets are stored. Use the following symbols:-

B, if on the beach.
N, if in special net drying huts.
H, if in the house, but not in the bed-room.
R, if in the bed-room.

Question 15:

Write the number of canoes owned, writing "0" if none owned.

Question 16: Kilns

Write down the number owned. If a woman smokes fish, this does not mean she owns the kiln she smokes in: how many, is precisely what we want to find out. Write "0" if no kilns are owned. After the number write "S" if swish kiln and "C" if cement-faced.

S H E E T 3.

Ask these questions about residents and regular visitors who are absent at present.

Question 4:

Ask for annual length of residence in months writing both the number, and actual months. Thus: 3 months January/March.

Question 6:

Same as Question 7 on previous sheet.