THE ECONOMICS OF SEASONAL LABOUR MIGRATION IN SRI LANKA

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F O R E W O R D

Large Scale irrigation settlement schemes established in the Dry Zone since 1930s have attracted migrant labour from the Wet Zone, seasonally, to satisfy the labour requirements at peak periods of paddy cultivation. With multi-purpose large scale settlement schemes taking shape in the Dry Zone now with greater intensity, the demand for labour is expected to register an upward trend. Previous studies on labour use in paddy cultivation have made reference to this phenomenon but the subject has not been dealt with comprehensively so that the outcome of such academic exercises can be made use of in policy options.

This research study hopes to shed light on the conditions which necessitate a seasonal labour movement from the Wet Zone to the Dry Zone, the likely requirement of seasonal labour of the Dry Zone farmers, the potential availability of such labour in the Wet Zone, the socio-economic conditions of both the seasonally migrant labourers and their employers and the ways of recruiting the migaratory labour and their wages. It is shown that the seasonal labour migration provides employment to otherwise unemployed groups of people in the Wet Zone during those periods while relieving the Dry Zone farmers from experiencing labour shortages at critical times. It serves as an income transfer machanism from the relatively wealthy Dry Zone farmers to the relatively poor Wet Zone labourers. For these reasons, the authors argue, that the seasonal labour migration is a healthy factor in the country's agrarian economy and call for a proper process of monitoring the agricultural labour market.

This research was conducted by Mr.G.R.Crooks (Visiting Researcher, ARTI) and Mr.H.A. Ranbanda (Research & Training Officer - ARTI). Both of them were also responsible for the preparation of the draft report. Mr. P.J. Gunawardena, Research & Training Officer, in consultation with Dr.N.Sandaratne of the Central Bank prepared the script in its present form for publication, in the absence of the authors.

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CHAPTER I

INTRODUCTION

1.1 THE SETTING

This Chapter discusses the conditions in which seasonal migratory labour movements have originated, the current state of knowledge of hired labour movements, and the issues and hypotheses this study attempts to shed light on. Chapter two discusses the methodology of the study. Following a discussion of survey findings in Chapters 3, 4 and 5, the final Chapter discusses the aspects of the labour market which require direct or indirect attention from policy makers.

The divergent levels of resource endowment and agricultural development in the Island's two main agro-ecological zones have created seasonal migratory movements of labour from the densely populated wet zone areas to dry zone agricultural settlements. The basic difference between wet and dry zones which concerns us here lies in the disparities in man: land ratios. Whilst for the Island as a whole the population density is some 568 persons/sq. mile, it exceeds 1,100 in the wet zone, but is only some 233 in the dry zone.

In spite of increasing fragmentation of land in the wet zone sometimes involving rotational system of land tenure (Moore & Wickramasinghe, 1978) and resulting in a widespread inability among families to grow enough paddy and other crops for their domestic requirements (Ranatunga & Abeysekera, 1977; Moore, 1980), early attempts to open up land for irrigated colonization in the dry zone met with little enthusiasm and some (notably, Moore & Wickramasinghe; 1980) have argued that the general neglect of smallholder farming in the wet zone that accompanied the development of estate agriculture led to the widespread belief among village communities that the road to prosperity lay in secure salaried employment on estates, or in the burgeoning government sector, or through development of trading activities. That the opportunities for such

employment are more abundant in the wet zone than in the dry zone is clear. Those who could obtain them would also attempt to assist friends and relatives into similar employment. The resultant network of social reciprocation might not always meet the job expectations of the less well-placed, who would have to make a living from a variety of sources - a small plot of land, occasional manual employment, petty trading and so on, but at least it provided the lure of what might materialise, a lure which the dry zone could not offer within the given framework of job expectations. When account is taken of the other characteristics of the social infrastructure in the wet zone - better schools, hospitals, travel and entertainment facilities - the relative attractiveness of the wet zone is increased vis a vis the dry zone, and it would not be unrealistic to expect permanent migration to gather momentum only at higher and more stable levels of income than in the wet zone.

These conditions have been responsible for several trends in seasonal migratory labour movement. Dry zone settlement drew on two main sources of potential colonists; those already living on or near the area to be developed in traditional dry zone (purana) villages and, those who had been drawn from the wet and intermediate zones. The latter was numerically more important and those people were brought over directly, but sometimes settled after a period of employment as labourers hired in building the colony infrastructure, which could also have involved some illicit cultivation in the area ("encroachment"). Settlers were thus predominantly rooted in those wet zone families who did not aspire to, or (more likely) aspired to, but with little prospect of obtaining, employment of at least a semi-permanent character in the estate or government sectors.

Second, small-farm technology developed in line with the resource characteristics of the two zones. In the wet zone, more than three quarters of the annually cropped land is prepared by human or animal power. In the dry zone, two thirds are prepared by tractor, reflecting the relative scarcity of labour and, latterly, of animal power (see Farrington et.al.,forthcoming). Others have however argued that animal power shortages have been induced by the widespread introduction of

tractors (Carr, 1975). The use of pesticides and herbicides is similarly more widespread in the dry zone where labour scarcity had lead farmers to opt for high technology substitutes (Ranatunga & Abeysekera 1977).

There has thus emerged, under conditions of labour shortage in the dry zone, a system of small farming which can draw on labour saving technology for some, but not all, operations. Planting and harvesting being the main exceptions. These farmers are predominantly colonists who are in the early stages of settlement and still maintain links with their villages of origin in the wet zone. Additionally, the main crop cultivated(paddy) is characterised by peaks and troughs of labour activity, the peaks being predominantly at land preparation/planting and at harvesting/threshing, which can be only partially mechanised. There is thus no incentive for small farmers to build up a permanent labour force as the small average size of farms, the seasonal nature of production and the "peaky" labour requirements within seasons do not enable them to keep such labour fully employed over the year. Locally available labour supplies are likely to be able to meet only a small part of these requirements, and because of the relatively later start of the season under irrigated farming in the dry zone compared with rainfed farming in the wet zone, the peak labour demand there occurs when labour is relatively free from agricultural work in the wet zone.

1.2 EARLIER STUDIES

A consistent finding of dry zone small farm surveys is that hired labour forms a high proportion of total labour input. For instance in a recent ARTI study (Ranatunga & Abeysekera, 1977) it was found that of the total labour inputs in paddy in the dry zone, 66% was hired labour. In that particular survey not a single operator has raised a paddy crop exclusively on family or exchange (Attan) labour. Hired labour may originate from within the village, within the district or from other districts. Wickramasekera (1977) recognises three types of labour available for work within the agricultural sector, namely attan or exchange labour, family labour and hired labour. He divides hired

labourers into 2 broad types. Firstly, permanent, regular or attached workers such as those employed in the estate and plantation sector and secondly, temporary or casual or daily paid workers, such as those employed in the peasant agricultural sector. In this context hired labour may be taken to mean labour that is paid either in cash or in kind (more usually in cash) for working on a given operation or operations. The hired labourers employed are usually manual labourers although some specialists are also employed such as buffalo drivers. Little is known as yet of the origin, relative importance and organization of seasonal hired labour movements in Sri Lanka.

Abeyratne (1965) and Jayawardena (1965) demonstrated that permanent migratory movements were taking place between the wet zone and dry zone but they were concerned with utilising Censal and Inter-Censal data in order to establish trends for permanent migration between the various districts. However, the permanent migration pattern thus determined seem to tie in well with the seasonal hired labour movements determined in this report.

Some (e.g. ILO, 1971) have pinpointed the short-fall in labour supply experienced in the dry zone during periods of peak labour demand in paddy cultivation, but have done little to establish the pattern of seasonal labour movements within the country and also little so establish [illegible] these movements in satisfying the demand.

Richards (1971) investigated hired labour in some detail and suggested that the highest per acre gross income is associated with the highest number of labour days hired (per farming unit) and the lowest with the lowest family labour input. Richards also introduced the idea of measuring the demand for casual labour in terms of differing wage rates; these being highest in the sparsely populated dry zone and lowest in the densely populated wet zone. This concept has also been used in this study, although many other factors will also affect the demand, such as a migrant worker's willingness to migrate, family ties, availability of work within the home area, local and distant wage rates, etc. Other results of Richards' work include the observation that progressive farmers use more labour for each operation and that some of the main operations on which

hired labour is used in relatively large amounts, such as weeding and transplanting are not yet "threatened by mechanization". Richards also mentions the possibility of increasing the hired labour requirement as diversification proceeds so that it might be possible for a family at some time in the future to have to employ one permanent labourer, assuming that cultivators are able and willing to grow non-paddy crops, but ignoring the role of improved small farmer technology.

Connell et.al.(1976) divide the impact of migration on the village of origin into remittances and the effect of absence and return of the migrating worker. Cash earned by the migrant will not only enable him or her to make more purchases but will also help to boost the village economy. This could be offset by the prolonged absence of migrants. The prolonged absence could also delay marriage and hence often reduce the birth-rate, as a temporary male deficit is created by males migrating, while women and children remain to look after land and homes. All these effects will be greater when migrants are away for the greater part of the year, but they may be insignificant for short-term migrants.

Perera and Gunawardena (1980) in a general study of hired labour in peasant agriculture in Sri Lanka, suggest that it is landless labourers and marginal farmers who form the bulk of seasonally migrant labour, and that it may be of higher incidence among young unmarried males than among those with family responsibilities. They suggest that the migration, initially arranged through family links, is now more frequently arranged through direct commercial transactions. They observe several modes of recruitment: the assembling of labour gangs in wet zone villages known from previous employment; spontaneous recruitment by labour contractors resident in the wet zone who transport the labour to dry zone paddy areas and negotiate contracts, managing and paying the labour from the proceeds of the contract, and individual search for work by labourers who migrate on their own initiative. They suggest several attractions to labourers of seasonally migrant work, including financial advantages, and a sense of adventure and cameraderie among the labourers.

1.3 SCOPE AND OBJECTIVES

This study attempts to identify the factors which create the demand for seasonal migratory labour in dry zone villages and the conditions which enable a supply of seasonal migratory labour from villages in the wet zone. These factors are investigated by the selection of sample of "donor" villages in the wet zone and a sample of "recipient" dry zone villages.

The demographic structure, the land tenure patterns and the economic opportunities of both the "donor" and "recipient" villages are studied to assess the factors determining the demand for, and supply of migratory labour. By relating the available man power to the agricultural opportunities based on land use patterns in each of these villages an attempt has been made to quantify the amount of labour which could be released by the wet zone villages and productively utilised in the dry zone villages. The attempt to quantify the amount of labour available and absorbed has only been done in broad terms using data available from other related studies. Therefore this aspect of the study is meant to be a broad assessment of the issue rather than the determination of specific magnitudes of such labour availability and absorption.

Besides identifying these factors which create the supply of, and demand for, seasonal agricultural labour, the study attempts to identify the manner in which the migratory labour was deployed from the wet zone to the dry zone and to assess the manner of wage determination in "recipient" dry zone villages. An issue which is also discussed is wether the deployment of such labour from the "donor" locations to "recipient" villages disrupts the agricultural activities of the former and benefits the economy of the latter.

The size of net benefit accuring to the national economy from seasonal labour migration is the socially-priced value of marginal product generated by such labour in the dry zone, less its opportunity cost in the wet zone, with some adjustment for re-location costs. Ideally, a large-scale and detailed study of migratory movements should be able to establish how widely the opportunity cost and money costs of labour in the dry zone

diverge from the wet zone at the time of migration. This would then lead to estimation of the net social value of migration. The scope of this study is more modest: it confines itself to identifying the main issues involved in migration and to quantify the cash incomes of migrants and the expenditure on them by the dry zone farmers. It does not estimate the opportunity cost or the social cost and benefits.

It seems likely that short-term migration fits in well with the piece-meal employment pattern of potential migrants. A large-scale study would need to establish what the scope for increased migration might be and whether increased volumes of migration might arise spontaneously or might require government initiative in either the existing supply areas of migratory labour and/or in areas which have not hitherto supplied much migrant labour to the dry zone. This study can indicate only the broad issues influencing the potential supply of migrant labour, and, detailed quantification is not attempted at this stage.

CHAPTER II

SURVEY DESIGN AND METHODOLOGY

2.1 THE STUDY

The survey based on six locations - 3 in the wet zone and 3 in the dry zone attempted to obtain data on the Socio-economic background of migrants; on the composition of their aggregate income and particularly the contribution made by earnings from migration; on the length of period for which they migrated; and the significance of migrant labour in dry zone farming systems. These data were obtained by direct field observations.

Resource constraints prevented a strictly random selection of study locations. Since the purpose of field work was to collect data on migratory labour, sampling was biased towards those areas known to engage, either as "donors" or "recipients", in migratory labour movements. A necessary disadvantage of this procedure is that it prevents multiplication of the sample data up to a regional or national scale. An attempt however is made in the remainder of the study to place the sample data into a broader context, and given the limited resources available, it is felt that the sampling procedure adopted was justified.

2.2 SURVEY METHODOLOGY

2.2.1 SAMPLING

Six study localities were chosen purposively to represent the broad seasonal migratory movements in Sri Lanka. They were chosen from two main areas where the seasonal migration can be observed, namely;

a) From Kurunegala and Kegalle districts to Polonnaruwa and Anuradhapura district,
b) From Matara district to Hambantota district.

Within those districts it was further observed that certain villages were typically either "donor" villages or "recipient" villages of seasonal migration labour. From the available information, a number of "donor" and "recipient" villages were purposively selected for study. From each of these "donor" or "recipient" villages a sample of about 35 households were selected for in-depth study. A list of selected villages and the number of households studied are given below:

Table 1 : Distribution of the sample households

District/Area	Donor/Recipient	Village	Effective sample size	
Kegalle	Donor	Peramadulla*		35
		Pethigammana*		32
Kurunegala*	Donor	Dangolla	13)	
		Pathirajamilla	11)	34
		Ulwalagedera	10)	
Matara	Donor	Udupihillagoda*	25)	35
		Lalpe	10)	
Hambantota*	Recipient	Andaragasyaya	10)	
		Magama	07)	32
		Pusthoramulla	15)	
Polonnaruwa*	Recipient	Kaudulla scheme Tract - 9	32)	32
Kalawewa*	Recipient	Aukana	02)	
		Sirimagama	14)	29
		Walaswewa	07)	
		Malbeligala	06)	

Note: For convenience, the asterisked names will be used in the text to identify the respective study area.

2.2.2 SAMPLE FRAME

The Food Controller's list of households was the only frame available for the selection of the sample. Having discussed with migrants and the village level officers namely, Gramasevaka, KVS, and Cultivation Officers, it was possible to locate a substantial number of migratory households. However, the random sampling technique could not be adopted here since the available number of migrants was inadequate for randomiztion in most of the study locations. Therefore, the researchers tended

to combine several adjacent villages to constitute an effective sample in most localities.

Methods of data collection

a) Questionnaire -
A questionnaire was administered to sample households of both "donor" and "recipient" villages.

b) Unstructured interviews -
This was mainly to gather information from the village level officials, leaders, and the other fellow farmers in addition to the data obtained from the questionnaire.

2.2.3 PROBLEMS IN SAMPLE SELECTION

It was very difficult to select an effective sample in the study villages. In some study villages it was difficult to distinguish seasonally migrant labour from a larger category of hired agricultural labour. Further, in many villages, the agricultural labourers (inclusive of seasonally migratory labour) are scattered and a definite pattern of their residence is difficult to identify for sampling purposes. Therefore, in some study localities the team amalgamated two or three villages to form a "donor" sample village.

2.2.4 REFERENCE PERIOD

A preliminary visit to the selected villages was made in March 1979. The questionnaire survey was carried out in April-May 1979 with the assistance of four trained investigators under the supervision of the Research Officers.

CHAPTER III

SOCIO-ECONOMIC CHARACTERISTICS OF THE SEASONAL MIGRATORY LABOUR HOUSEHOLDS

3.1 HOUSEHOLD SIZE

The average household size in "donor" villages is high except in Kurunegala. The all-village average household size is 6.7. It varies from 5.6 in Kurunegala and 7.4 in Udupihilegoda (Matara).

All the sample households studied are nuclear families. The masculinity ratio of all villages is 111.42. The lowest reported from Pethigammana (Kegalle) while the highest is from Udupihillegoda. In Peramadulla it is 119 and in Kurunegala it is 114. The dominance of male population is found in each study locality except in Pethigammana. The survey revealed that the average household size of all "donor" villages is equal to the average household size of all"recipient"villages.

3.2 AGE STRUCTURE AND DEPENDENCY

Children under 14 years of age and adults over 65 years are considered as dependents for the purpose of this study.

Table 2: Age distribution and dependency ratios in donor villages

Donor villages	All ages	0 - 14 %	15 - 64 %	65 & over %	Dependency ratio
Udupihillegoda	100.0	39.0	56.9	4.1	0.78
Pethigammana	100.0	28.7	66.4	4.9	0.49
Peramadulla	100.0	30.3	66.2	3.5	0.52
Kurunegala	100.0	26.0	71.4	2.6	0.40
All villages	100.0	31.1	64.6	4.3	0.55

The dependency ratio for all donor villages is 55%. (see table 2). But the individual villages show a remarkable variation. The highest dependency ratio is at Udupihillegoda which is as high as 78% while the lowest is at Kurunegala (40%). One important point emerges from the above table is that the contribution of two factors i.e. 0 - 14 age group and the 65 & over group, to the dependency ratio is uneven. The group of 65 & over remains at a very low level. Therefore, the main influence on the dependency ratio of all villages is the dependent children in the age group 0 - 14 years. At Udupihillegoda this group constitutes as much as 39% of the total population but in Kurunegala it is only 26%. The corresponding dependency ratios in those two villages are 78% and 40% respectively. But children (under 14 years) often work as family helpers in agricultural activities.

3.3 EDUCATION

Table 3 indicates the distribution of levels of education attained by the household members of the all villages.

Table 3 : Educational attainment according to sex in donor & recipient villages

Level of Education	% of all ("Donor" villages)			% of all ("Recipient" villages)		
	M	F	T	M	F	T
No schooling*	14.2	24.3	19.0	9.9	18.5	14.0
Primary	53.4	43.0	48.5	48.0	41.6	45.0
Grade 6 to GCE (O.L)	26.9	27.1	27.0	33.2	31.0	32.1
Passed GCE (O.L)	5.4	5.6	5.5	8.9	8.9	8.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	479	428	907	304	281	585

* including children under 5 years of age.
M = Male F = Female T = Total

The educational attainment of the villagers is very low. A significant proportion (48.5%) had only a few years of education, which perhaps a maximum of 5 years. Hardly anybody in the sample has gained any

professional skill. Only 5.5% of the total respondents have passed G.C.E.(O.L), the minimum level of education which a person should have to aspire for a white collar job. The majority do not possess the "required" educational qualifications for any job outside the agricultural sector. However, two characteristics were noted in all study villages: (a) the educational attainment of the youth is higher than that of the older group, perhaps due to the free education facilities and the general development of remote areas and (b) the educational attainment of employer ("recipient") villages is only marginally higher than that of the "donor" villages. Among recipient villages only 8.9% passed G.C.E. (O.L) and 59% had only primary education ro no schooling.

3.4 NATURE OF HOUSING

Almost 75% of the houses are wattle and daub huts, with cadjan (woven palm leaf) and straw roofs. (see table 4).

Table 4: Nature of housing and facilities available

	Perama-dulla		Pethi-gammana		Kuru-negala		Udupihi-llegoda		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Houses with permanent wall	6	17.1	12	37.5	8	23.5	9	25.7	35	25.7
Houses with permanent roof	5	14.3	8	25.0	2	5.9	10	28.6	25	18.4
Houses having own well	13	37.1	13	40.6	18	52.9	9	25.7	53	29.0
Houses having a lavatory	26	74.3	32	100.0	15	44.1	27	77.1	100	73.5
Houses with electricity	-	-	-	-	-	-	-	-	-	-
Accessability to houses by a motorable or a cart road	01	2.9	10	31.3	18	52.9	07	20.0	36	26.5
Total sample households	35		32		34		35		136	

The number of rooms does not exceed two. There is no doubt that the rooms are overcrowded with over three persons per room. None of the bouses has an electricity supply. Sometimes several families share parts of a single house. The sanitory arrangements in the villages are unsatisfactory, especially in the Kurunegala villages, where, only about 44% of the sample houses have lavatories. In the other sample villages over 70% of houses had these facilities. Drinking water is obtained from wells. A small number of households have reported having their own wells. However the present provision for drinking water is unsatisfactory in most of the donor villages. Bathing is mainly done in the stream and at wells. It is observed that only 27% of houses in donor villages have access through a motorable or a cart road.

3.5 OWNERSHIP OF HOUSEHOLD ITEMS

Ownership of durable items such as radios, sewing machines etc.,is normally considered as an indicator of higher economic status in the rural setting. A very few "donor" village households own such items. In some villages none of them reported wall clocks, petromax lamps or kerosene cookers as their property.

Table 5 : No.of items/transport facilities available in sample households(%)

	Udup hille goda	Pethi gamma na	Pera madu lla	Kuru nega la	All "Donor" villages	Polo nna ruwa	Ham ban tota	Kala wewa	All "Recipiept villages
Wall clock	9	-	3	20	8	38	40	24	34
Petromax lamp	6	-	11	34	13	94	54	69	72
Radio	26	28	37	40	32	81	80	76	79
Sewing machine	11	6	9	9	9	59	54	48	54
Kerosene cooker	-	-	-	3	1	3	-	7	3
Cart	-	-	-	3	1	19	9	14	14
Bicycle	3	3	3	14	6	84	46	66	65

Note Underlined figures show the village with the highest figure.

A comparison of the availability of household items at Kurunegala village with other "donor" villages indicates that the households at Kurunegala owned the highest number of these items except sewing machines. This implies that the households of Kurunegala are economically better off among other "donor" villages. The Peramadulla village appears to be the poorest.

The distribution of household items among "recipient" villages indicates a completely different picture. In general most of the selected items were possessed by "recipient" households thereby indicating relatively higher economic stability.

3.6 OWNERSHIP OF FARM EQUIPMENT

A very few items such as mammoties, crow bars, etc., were available with many of the "donor" households. The availability of farm implements with seasonally migrant labour households at Kurunegala is relatively higher when compared with the other "donor" villages. Farm equipment was of little use to the landless migratory labour households, which had very restricted farming activities (see below).

The farm equipment assets of "recipient" households were relatively high compared to "donor" households. One sixth of the farmers reported having their own two wheel tractors at Polonnaruwa and Hambantota sample villages while there was none among Kalawewa recipient households. The four wheel tractors were found in one household at Polonnaruwa and two households at Hambantota. The most lucrative source of income of most " recipient " households was the hiring out of two-wheel and four-wheel tractors. Equipment such as mammoties, steel ploughs, water pumps, weeders, sprayers were available at most of the "recipient" households. Steel ploughs formed the common tillage implement at the Polonnaruwa sample village, while the wooden ploughs were found with over half the households at the Kalawewa villages. None of the sample households possessed wooden ploughs at both Polonnaruwa and Hambantota villages where the land preparation is mainly done by tractors.

3.7 LIVESTOCK ASSETS

Livestock farming is of minor importance in most of the "donor" villages. Commercial livestock farming was not found in any of the "donor" areas. The possession of cattle in"recipient"areas seems to be of great importance. The aim of keeping cattle is mainly for milk production and for obtaining draught power. Over 50% of the sample households had buffaloes averaging 8 animals per herd. Neat cattle raising was seen with about 6 animals per farm. Poultry keeping was found at several households mainly for domestic consumption.

The picture presented here thus corresponds closely with that suggested in our introduction - that of a potentially migrant sector with low educational attainment and low socio-economic status, for whom the prospects of stable employment in the wet zone are few. The possibility of seasonal migration must therefore come as an income enhancing opportunity for them as subsequent sections on the size and composition of income and land holdings would indicate.

3.8 INCOME

The complete income table for donor villages is given on page 19. The details of income cover the six month period up to the time of survey, namely November to April which is a period roughly corresponsing to Maha 1978/79. (a) No analysis of costs has been done; the data presented are a result of a single-shot survey on household income.

The most striking point is the large proportion of total household income which was derived from work as hired labourers. This is broken

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(a) It could be argued that as this data is for six months only it does not present a realistic picture. However, field observations indicate that the greatest proportion of household income comes from Maha paddy and migratory work during this season. The proportions of migratory: non migratory work is not expected to change greatly through the whole year.

down further in Table 7 both for the income accuring from migratory labour and for this in combination with the income accruing from work done locally as hired labourers. It can be seen that in Peramadulla 58% of total income came from migrant labour.

Income derived from crops is highest in Kurunegala where holdings are larger and some households rely more on crops than on hired labour migration for their income. 35% of total income is derived from crops in Kurunegala compared with 12% in Peramadulla, 19% in Pettigammana and 22% in Udupihillegoda. (see note at foot of Table 6).

An important factor is dole money. After the budget of 1978, a scheme was introduced by the government for the payment of Rs.50/- to any single, unemployed member of a household aged 18-35 where the total monthly household income is less than Rs.300/-. The average monthly income (excluding dole money) for all households derived from the data was:

	Rs.
Peramadulla	372.5
Pethigammana	390.0
Kurunegala	392.3
Udupihillagoda	191.6 - see note at foot on Table 6.

Some unemployed youths may be reluctant to migrate as they might be satisfied with collecting their dole money whilst doing a sedentary job in their home village.

In Peramadulla and Pethigammana, farmers reported that the greatest proportion of their income came from cropping and migratory work during the Maha season, so that when taken over a whole year it is likely that the actual monthly income would be somewhat less than what is given above. The figure for Kurunegala was also affected by the fact that paddy production was a major source of income to cultivators there. At the time the questionnaire was administered not all the paddy had been harvested; also many cultivators expected to take a Yala crop which would raise their income. These two factors might mean that

the above figure is an underestimate.

Apart from a few households reporting rubber tapping as a source of income in Peramadulla and Pethigammana, other occupations such as beedi wrapping, coir weaving etc., only accounted for some 8% of total recorded income. 14.5% of all households reported some income from livestock but this only amounted to 2% of total recorded income.

In summary, we find that the incomes of "donor" households are low, generally Rs.300-400 a month, compared with what one could expect to find widely in the dry zone, Rs.430/- in low-intensity and Rs.900/- in high-intensity farming in the dry zone (Ranatunga et al. 1979; Ranatunga and Abeysekera, 1977). "Donor" households' income are not likely to be much lower than in most of the wet zone rural sector. In addition, they are made up from a wide variety of casual occupations. The proportion of their total income attributable to earnings from migration is very high. All of these factors suggest that seasonal migration strongly enhance the livelihoods of "donor" households; it represents a substantial income transfer from high to low income areas; it occurs at a time when the opportunity cost of such labour in the wet zone is low, yet gives high marginal returns to the dry zone farmer by relieving a critical bottleneck.

Table 6: Income from all source during Maha 1978/1979 -"Donor"Villages

	Peramadulla		Pethigammana		Kurunegala		[a]Udupihillegoda	
	No. of households reporting	Income	No. of households reporting	Income	No. of households reporting	Income	No. of households reporting	Income
1. Migration	35	47323	32	37866	35	25162	35	13659
2. Crops								
Paddy	16	7890	11	11180	27	20400	15	7090
Coconut	27	1751	15	2270	17	10284	26	2250
Fruit	-	-	4	940	2	175	3	165
Arecanut	2	50	1	200	1	15	-	-
Rubber	-	-	-	300	-	-	-	-
Coffee	1	300	1	200	-	-	-	-
Betel	-	-	1	100	-	-	-	-
3. Livestock								
Poultry	3	315	2	75	5	14965	-	-
Dairy products	3	792	3	1026	2	530	2	372
4. Others								
Local labouring	29	11118	20	10410	24	6954	24	12475
Rubber tapping	6	3660	9	6330	-	-	-	-
Beedi wrapping	1	540	2	870	1	600		
Timber sawing	-	-	4	1500	-	-	3	730
Tea plucking	1	25	3	788	-	-	-	-
Coir weaving	-	-	-	-	4	2905	-	-
Sugar cane harvesting	1	360	-	-	-	-	-	-
Hiring of buffaloes	2	500	-	-	-	-	-	-
Brick making	-	-	-	-	1	600	-	-
Mechanical work	1	1800	-	0	-	-	1	1800
Self employment	1	1800	1	900	4	1660	2	1700
Government jobs	-	-	-	-	3	1325	-	-
Pensions	-	-	-	-	8	1547	-	-
Dole money	12	3400	20	6200	-	-	4	3800
Total		81624		81155		87122		44041

a - had not returned from harvesting.

Table 7: Household Income accuring from hired labour

		Pera madulla	Pethi gammana	Kuru negala	Udupihi llegoda
Total household income	Rs.	81624	81155	87122	44041
Income from working as migrating hired labour	Rs.	47323	37866	25162	13659
% of total household income resulting from work as migrating hired labour		58	47	29	31
Income from working as local hired labour	Rs.	11118	10410	6954	12475
Total income from all hired labour work	Rs.	58441	48276	32116	26134
% of total household income resulting from all hired labour work		72	60	37	60

CHAPTER IV

LAND USE AND LAND TENURE

This Chapter deals with the pattern of land ownership and land operation in both "donor" and "recipient" villages households. This analysis will show how ownership of land in both types of households create the basic conditions for seasonal migration of labour.

4.1 OWNED LAND (DONOR VILLAGES)

All types of land under single, joint or any other forms of ownership are defined here as owned land. About 88% of "donor" village households reported such owned land for cultivation. The percentage of owned land is lowest in Peramadulla, Udupihillegoda and Pethigammana. The average size of area owned was below 1 acre in all "donor" villages with the exception of the Kurunegala sample. This is confirmed by the following table.

Table 8: Distribution of households owning agricultural land.

	Number of household reporting owned land	% of households reporting owned land	Extent (acres)	Average area owned (acres)
Kurunegala	29	85.0	36.3	1.25
Peramadulla	30	86.0	20.93	0.70
Pethigammana	31	97.0	14.659	0.47
Udupihillegoda	30	86.0	16.17	0.54
All villages	120	88.0	88.059	0.73

The Kurunegala sample has the highest average owned land per household of 1.25 acres with Pethigammana the lowest at 0.47 acre per household. A further break down of size distribution of owned holdings for all land types in Table 9 indicates that 63.3% of the households owned ½ acre or less of land. Further it can be seen that for all survey locations the modal class of owned land is 0-0.5 acres. In other survey locations with the exception of Kurunegala almost all the owners have a holding of 2 acres or less in extent. Only five households

Table 9: Size distribution of owned holding for all land

	Kurunegala		Peramadulla		Pethigammana		Udupihillegoda		All	
	No. reporting	Area	No. reporting	Area	No. reporting	Area	No. reporting	Area	No. reporting	Area
0-0.5	13	4.49	19	5.375	23	6.121	21	5.42	76	21.406
0.6-1.0	5	4.54	5	4.375	6	5.288	05	4.25	21	18.453
1.1-2.0	6	9.02	5	7.68	2	3.25	03	4.00	16	23.95
2.1-3.0	2	4.25	-	-	-	-	01	2.50	3	6.75
3.1-5.0	2	8.00	1	3.5	-	-	-	-	3	11.5
More than 5 acres	1	6.00	-	-	-	-	-	-	1	6.0
	29	36.30	30	20.93	31	14.659	30	16.17	120	88.059
Average extent owned (Acres)		1.25		0.7		0.47		0.54		0.73

control half of the total owned land in the Kurunegala sample. Generally the availability of owned land in all survey locations seems to be low in extent.

4.2 OPERATED LAND (DONOR VILLAGES)

The extent of land available for cultivation in the study locations revealed that the operational holdings were slightly higher than that of reported owned lands of the households. The average operational holding for all study locations was 1.23 acres. It was less than 1 acre for Pethigammana and Udupihillegoda but over 1½ acres in Kurunegala and Peramadulla.

Table 10: Distribution of households operating agricultural land

	Number reporting	Extent (acres)	Average size of operated area (acres)
Kurunegala	32	52.48	1.64
Peramadulla	35	54.13	1.55
Pethigammana	32	24.489	0.77
Udupihillegoda	32	28.39	0.92
All villages	130	159.479	1.23

Several households operated lowland as well as highlands under various forms of tenure although they hardly owned any of these lands. However, the percentage of donor village seasonally migratory households reporting land operated (including single owned, jointly owned, rented/leased in an other forms of lands) was as follows:

Lowland	52.2%
Highland	11.76%
Home garden	92.61%

Nearly every sample household has operational rights over a home garden. The operators cultivate jak, arecanut, breadfruit, coffee, banana and mango mainly for household consumption. Very few of them have any

highland (11.76%) in addition to their homegardens. However, over half of the sample households operated some lowlands mainly for paddy despite average size of holding being about 0.85 acres.

Table 11 shows the size distribution of operational holdings for all land types (low land, high land and home gardens). For all survey locations (with the exception of Kurunegala), the modal class of operated land is 0-0.5 acres. Kurunegala has a modal class of 0.6-1.80 acres. Kurunegala also has the highest average operated acreage per household of 1.64 acres with Pethigammana the lowest as 0.77 acres per household. The average size of an operational holding for all land type is illustrated in Table 12. However, the average size of an operated highland was larger than that of the average size of an operational lowland and homegardens. Cropping ratio on the lowland operated reached 100% for the period covered by the survey, i.e. all the land was cultivated for the last Maha 78/79 season.

A break down of the tenurial status of all land operated by households within survey locations is given in Table 12. All types of land were operated under various forms of tenure. All lands can be classified under four tenurial categories i.e. sole owner, joint owner, rented/ leased in and other.

Sole-owned operational lowland varied between survey locations ranging from 1.25 acres in Udupihillegoda to 11.72 acres in Kurunegala. This would tend to support the hypothesis that Kurunegala is relatively "better off" than the other survey locations, if ownership of land is taken as a criterion for determining the socio-economic status.

Rented/leased in lowland holdings were found in all survey locations where the tenancy is an important factor determining lowland operations. In the majority of the villages, paddies are grown in rented/leased in lands. Out of the 82 lowland parcels, 51 parcels were rented/leased in lands. Several households reported operating more than one parcel (leased/rented in) although parcelization does not seem to be a serious problem in the reporting households. Joint ownership of lowland was confined to Peramadulla as well as Kurunegala and is usually a result

Table 11: Donor Villages - Size distribution of operated holdings for all land types

	Kurunegala		Peramadulla		Pethigammana		Udupihillegoda		All villages	
	No. reporting	Area	No. reporting	Area	No. reporting	Area	No. reporting	Area	No. reporting	Area
0-0.5	6	2.0	11	3.38	16	4.33	16	4.22	49	13.93
0.6-1.0	7	5.4	10	7.945	9	8.038	4	3.45	30	24.473
1.1-2.0	14	20.34	7	10.625	5	7.371	8	11.53	34	49.866
2.1-3.0	1	2.25	4	11.18	2	4.75	2	5.18	9	23.36
3.1-5.0	2	8.00	2	8.5	-	-	1	4.00	5	28.5
More than 5 acres	2	14.85	1	12.5	-	-	-	-	3	27.35
	32	52.48	35	54.13	32	24.489	31	28.38	130	159.479
Average operated area		1.64		1.55		0.77		0.92		1.23

Table 12: Donor Villages - Distribution of operational holdings classified by form of tenure and type of land

Land Type	Kurunegala (acres)			Peramadulla (acres)			Udupihillegoda (acres)			Pethigammana (acres)			All villages (acres)		
	Low land	High land	Home g.	Low land	High land	Home g.	Low land	High land	Home g.	Low land	High land	Home g.	Low land	High land	Home g.
Sole owned	11.72 (17)	5.625 (6)	10.04 (15)	0.875 (2)	1.35 (1)	7.375 (8)	1.25 (2)	0.25 (1)	3.31 (7)	2.163 (3)	0.5 (7)	3.996 (14)	16.008 (24)	7.725 (9)	24.721 (44)
Jointly owned	4.00 (5)	1.00 (1)	4.91 (14)	0.75 (1)	0.18 (2)	10.4 (22)	-	0.25 (1)	11.11 (23)	-	-	8.00 (17)	4.75 (6)	1.43 (4)	34.42 (76)
Rented in/ leased in	7.68 (15)	-	-	11.7 (15)	-	1.0 (1)	11.88 (13)	-	0.33 (1)	7.08 (8)	1.0 (1)	-	38.34 (51)	1.0 (1)	1.33 (2)
Other	1.00 (1)	5.5 (2)	1.0 (1)	-	5.0 (1)	15.5 (3)	-	-	-	-	-	1.75 (1)	1.0 (1)	10.5 (3)	18.25 (5)
Total	24.40 (38)	12.12 (9)	15.25 (30)	13.33 (18)	6.53 (4)	34.28 (34)	13.13 (15)	0.5 (2)	14.75 (31)	9.24 (11)	1.5 (2)	13.75 (31)	60.09 (82)	10.5 (17)	78.72 (127)
No. of reporting households	28	9	30	17	3	34	15	2	31	11	2	31	71	16	126
Average area for reporting household	0.87	1.35	0.53	0.78	2.18	1.00	0.88	0.25	0.48	0.84	0.75	0.44	0.85	1.29	0.62

No. of parcels in parentheses

of members of the same household having a claim on the same piece of land. Certain forms of joint ownership like Thattumaru and Kattimaru are also found in the survey locations.

Small plots of lowland were available in Udupihillegoda village for cultivation under the tenure category of rented or leased in. This reflects the shortage of lowland in Udupihillegoda available for individual ownership, since most land rented-in belongs to the rural temple. Only two households reported having their own lowland for cultivation. The land categorised under "other" was defined here as lands which are under control of caretakers (or most probably watchers) and encroachments. The encroached lands were in negligible proportions in each sample locations. The majority of the remaining large highland holdings were in the "other" category or under coconut plantations.

4.3 OWNED LAND (RECIPIENT VILLAGES)

The availability of owned lands for recipient village households varied among the study locations. The LDO allottments were considered as owned lands, hence 100% of the Kalawewa households reported having owned land for cultivation whereas only 50% of the households of Hambantota had any owned lands for cultivation. The recipient village household reporting owned land for cultivation was 75%. In contrast 88% of donor households reported as land owners, the number of personsown any form of land in the recipient village households was significantly less than that of reporting donor village households. Non-ownership of land was prevalent in the Hambantota survey location where the 50% of total households were landless while Polonnaruwa reported 22.6%. However, in terms of extent, the total owned land area cultivated by recipient village households was much greater than that of the "donor" households. The average size of area owned for all land types was 3.75 acres for rdcipient households (Table 13).

In Hambantota many of the respondent households worked as tenants under the "Gambaraya system". Extensive non-ownership among operators resulted in 50% of the households not claiming any form of ownership of lands. In Polonnaruwa 77.4% reported to have owned land (including LDO allottments).

This implies the presence of a considerable proportion of encroaches among the LDO land holders.

The size distribution of owned land holdings of recipient village households indicates (Table 15) a large holding size in Polonnaruwa where the modal class is 4.1-5.0 acres. In Hambantota modal class is 0.6-1.0 acre. Thus it is evident that owners of big as well as small farms use migratory labour in Hambantota. Further, it is observed that there is not a single household with more than 10 acres in recipient villages. The owned lands for cultivation in both Polonnaruwa and Kalawewa study locations were lands allocated under the Land Development Ordinance. The allocation was 3 acres of lowland and 2 acres of highland in Polonnaruwa (Kaudulla Scheme) whereas the Kalawewa household received the present allocation of 2½ acres of lowland and ½ acre of highland.

Table 13: Distribution of Households owning agricultural land

	No. reporting	Extent (acres)	Average area owned (acres)	% of households reporting owned land
Polonnaruwa	24	115	4.79	77.4
Kalawewa	29	105.25	3.63	100.0
Hambantota	16	38.25	2.39	50.0C
All villages	69	258.5	3.75	75.00

Polonnaruwa had the highest average owned acreage per household of 4.79 while Hambantota the lowest with 2.39 acres per household.

4.4 OPERATED LAND (RECIPIENT VILLAGES)

The percentage of recipient households reporting operated land differ greatly from those of the donor households. 25% of the sample is landless. Landlessness was not a limiting factor in cultivation in these areas. Lowland was operated by all recipient village households although all of them did not own the land. Migratory labour was entirely used for lowland cultivation. A comparatively large number of households reported irrigated or unirrigated land available for cultivation. The average size of operated land reported was 4.73 acres lowland, 2.04 acres highland and 1.35 acres home garden (Table 16.)

Table 14: Size distribution of owned holding for all land types

	Polonnaruwa		Kalawewa		Hambantota		All villages	
	No. reporting	Area	No. reporting	Area	No. reporting	Area	No. reporting	Area
Up to 0.5	-	-	-	-	1	0.5	1	0.50
0.6 - 1.0	-	-	-	-	6	5.75	6	5.75
1.1 - 2.0	-	-	1	2	4	8.00	5	10.00
2.1 - 3.0	3	9	18	54	2	6.00	25	75.00
3.1 - 4.0	2	8	5	17.25	-	-	7	25.25
4.1 - 5.0	18	90	1	4.5	1	5.00	18	89.50
5.1 -10.0	1	8	4	27.50	2	13.00	7	48.50
More than 10	-	-	-	-	-	-	-	-
Total	24	115	29	105.25	16	38.25	69	258.50
Average owned extent (acres)		4.79		3.63		2.39		3.75

Table 15: Size distribution of operated holding for all land type

	Polonnaruwa		Kalawewa		Hambantota		All villages	
	No. reporting	Area	No. reporting	Area	No. reporting	Area	No. reporting	Area
Up to 0.5	-	-	-	-	-	-	-	-
0.6 - 1.0	-	-	-	-	-	-	-	-
1.1 - 2.0	-	-	1	2.0	-	-	1	2.0
2.1 - 3.0	2	6	12	36.5	1	3.0	15	45.5
3.1 - 4.0	5	19.25	8	29.5	2	8.0	15	56.75
4.1 - 5.0	10	49.5	1	4.5	2	8.75	13	62.75
5.1 -10.0	10	79.5	7	46.0	19	133.06	36	258.56
More than 10	4	61.0	-	-	8	101.75	12	162.75
Total	31	215.25	29	118.5	32	254.56	92	588.31
Average extent (acres)		6.94		4.09		7.96		6.39

These sizes are relatively much higher than those in the donor villages. The size distribution of operated holdings for all land types indicates (Table 15) that households in Hambantota and Polonnaruwa, where the modal class fall into 5.1 - 10.0 acres, operated relatively larger holdings. Kalawewa had the lowest average size of operational holding with a modal class of 2.1 - 3.0 acres. Although Hambantota had the lowest owned land per household, it had the highest operational acreage per household of 7.96. Further, cultivation of chena land was confined to recipient households in Hambantota. Every household was involved in paddy cultivation while only 15% did any highland cultivation in the study villages. Nearly every household has some operational right over a small home garden. In considering the tenurial status of the land operated by recipient households given in Table 16, the existence of a fairly large extent of lowland under LDO land category can be seen. In Hambantota where the proportion of LDO lands is small, the majority of holdings was rented or leased in. Owned land (either solely or jointly owned) operated was only significant in Hambantota. Encroachments on crown lands were found in all survey locations with the highest incidence of Polonnaruwa recipient households.

In summary, the data reveal imbalances in the land holdings of donor and recipient areas in line with differences in wet/dry zone population pressures (sec. ch. 1) and income levels. The average operated land holding in the dry zone locations was found to be 8.12 acres (including 4.73 acres of lowland) whereas in the wet zone study locations it was only 1.23 acres. These findings are consistent with earlier suggestions (Ch. 3 above)that seasonal migration efficiently redresses the imbalances generated by differing population pressures by relieving peak season labour shortages in dry zone paddy farming.

Table 16: Recipient villages - Distribution of operational holdings classified by forms of tenure and types of land

Land type	Polonnaruwa (Ac.)			Kalawewa (Ac.)			Hambantota (Ac.)				All villages (Ac.)		
	Low land	High land	Home g.	Low land	High land	Home g.	Low land	High land	Home g.	Chena	Low land	High land	Home g.
Sole owned	-	-	-	0.75 (1)	-	3 (1)	18 (5)	4.5 (3)	12.5 (10)	-	18.75 (6)	4.5 (3)	15.5 (11)
Jointly owned	-	-	-	8.5 (3)	-	2.5 (3)	16 (2)	-	1.563 (2)	-	24.50 (5)	-	4.06 (5)
LDO lands	74 (24)	-	43 (22)	74 (29)	4 (8)	13.5 (21)	9.5 (3)	-	11.5 (7)	-	157.5 (56)	4 (8)	68 (50)
Rented/leased in	56.5 (19)	13 (2)	-	5.25 (2)	4 (1)	-	151.5 (36)	-	8.5 (5)	-	213.25 (57)	17 (3)	8.5 (5)
Encroachment on crown lands	21 (7)	-	7.75 (7)	-	1 (1)	1 (1)	-	-	2.5 (2)	-	21 (7)	1 (1)	11.25 (10)
Other	-	-	-	-	-	1 (1)	-	2 (2)	6.5 (5)	10.0 (4)	-	2 (2)	7.5 (6)
Total	151.5 (50)	13 (2)	50.75 (29)	88.5 (35)	9 (10)	21 (27)	195 (46)	6.5 (5)	43.06 (31)	10.0 (4)	435 (131)	28.5 (17)	114.81 (87)
Average parcel size	3.03	6.5	1.75	2.52	0.90	0.78	4.23	1.30	1.39	2.5	3.32	1.68	1.32
No. reporting households	31	1	29	29	9	26	32	4	30	4	92	14	85
Av. area for reporting households (acres)	4.89	13.0	1.75	3.04	1.00	0.81	6.09	1.63	1.44	2.5	4.73	2.04	1.35

No. of parcels in parentheses.

CHAPTER V

THE MARKET FOR MIGRATORY LABOUR AND WAGE DETERMINATION

5.1 DEMAND FOR SEASONAL MIGRATORY LABOUR

The demand for seasonal migratory labour in the "recipient" areas is an outcome of the time specific nature of the main operations in paddy cultivation, and of limited local availability of labour to meet those peak requirements. In major irrigation schemes in the dry zone the issues of water for cultivation purposes are time-scheduled; water is issued on specific days for specific periods of time. Therefore it is necessary for each cultivator to complete certain operations such as land-preparation and transplanting within the time schedule. The size of the holdings in these areas makes it difficult for farm households to cope with the major operations mentioned above within a short period, with only their family labour, - the average size of a household in "recipient" areas is about 6.7 members-even though it is reasonable to assume that households allocate all the available family labour in peak periods to agricultural operations in the household farm.

The available labour within the household depends on the age and sex distribution of the household members. The potential work force, assumed to be in the 15-64 years age cohort, varies between survey locations ranging from 53% in Polonnaruwa to 71% in Hambantota. On the other hand in the recipient regions the masculinity ratio is generally favourable.

Table 17: Age distribution of recipient household

	0 - 14	15 - 64	65 & over
Kalawewa	38.9	58.4	2.3
Polonnaruwa	44.0	52.8	2.2
Hambantota	22.4	70.5	6.5
All villages	34.9	61.4	3.8

	Kalawewa	Polonnaruwa	Hambantota	All villages
Masculinity ratio	122.4	105.5	101.8	108.0

Male members seem to dominate in each study location. Further, certain operations which are normally the responsibility of female labour appear to be carried out by male labour in the dry zone villages. Hence, the component of male labour in the total labour use is expected to be particularly high. It is well-known that work in irrigated small holder farming is strongly concentrated into peak periods in land preparation/planting and harvesting/threshing. The question arises as to how adequate family labour from the observed family sizes would be to meet these peak requirements.

In this study an attempt was made to assess the extent of household labour availability for work in the household farm. The following table indicates the availability of household labour in terms of manday equivalents of full-time work for each region.

Table 18: Potential and available work force in the recipient areas

Potential work force (15-64)			Available work force			
	M	F	M	F	C	Total man day equivalents
Kalawewa	56	43	55	36	25	96.3
Polonnaruwa	69	52	67	47	17	113.1
Hambantota	84	80	75	51	2	116.8

(a woman day and child day is treated as equivalent to 0.8 and 0.5 manday equivalent respectively)

A number of general observations can be made on the operation-wise surplus-deficit situation of labour, taking the following factors into account i.e. the pattern of labour utilisation, extent of operated area and the availability of household labour. No direct statistical information is available in the present study on the labour utilisation pattern, but information from other studies can be used in quantifying the operation-wise deficits or surpluses of

labour for the intensive paddy areas in question.

ARTI (1977) for instance, shows the operation-wise labour utilisation pattern both in Hambantota and Polonnaruwa. Another ARTI study (forthcoming) indicates the pattern of labour used for paddy and other crops in the Mahaweli H area. It is assumed that the observed pattern of labour utilisation is similar for the present study areas. Thus, estimated deficits and surpluses of labour are illustrated in Table 19.

Table 19: Estimated surpluses and deficits of labour in the recipient areas

	Average duration for operation (days) (A)	Estimated labour utilisation for total operated extent (B)			Potential House hold labour availability for total extent (C)			Deficit or surplus (C) - (B)		
		Kala-wewa	Polo-nna ruwa	Ham-ban tota	Kala-wewa	Polo-nna ruwa	Ham-ban tota	Kala-wewa	Polo-nna ruwa	Ham-ban tota
Land preparation	30	1398	3833	2145	1650	2010	2250	+ 252	-1832	+ 105
Planting	5	761	4015	2808	207	231	209	- 554	-3784	- 2589
Crop care	100	947	1333	1326	9630	11310	11680	+8683	+9987	+10354
Harvesting threshing & winnowing	7	2089	4727	3608	674	792	818	-1415	-3935	- 279
Total	142	5195 (88.5)	13908 (151.5)	9887 (195)	12161	14343	14957	+6966	+ 435	+ 5070

Note: See page 37 for foot notes.

Foot notes on table 19

i) Column B is calculated on the basis of the observed pattern of labour utilisation in respective areas and data given in two of the ARTI studies:

(a) Profitability and resource characteristics of paddy farming (1977)
(b) Factors influencing the cultivation of subsidiary food crops (forthcoming)

ii) The quantity of potential labour available in column (c) is obtained by multiplying the per household figure in Table 18 by the average number of days duration for operation in column (A).

iii) Total operated lowland extent is given in paranthesis.

iv) The following generally prevalent labour use patterns were accepted in the calculations:

(a) Land preparation is considered a male's task
(b) Transplanting is performed by females
(c) All three categories of labour are involved in harvesting and related operations.

Although there is evidence of an overall labour surplus in all three locations, labour shortages occur during periods of peak labour requirement for planting, harvesting, threshing and winnowing in all three locations. There is also a deficit of labour during land preparation in Polonnaruwa. However due to the low labour requirement for crop care, a small amount of excess labour is available over a long period, for crop care in each location. Consequently this task does not require hired labour.

On the basis of these figures, one would expect that household labour would be more than adequate for land preparation in both Hambantota and Kalawewa, but the extent to which the available household labour is utilised cannot be determined rigorously in this exercise. Further, large variations in the figures on total labour input per acre across the sample villages reflect farm mechanization and the degree of labour utilisation. The low input of labour in Hambantota has been explained in terms of intensive use of machinery for land preparation, threshing and winnowing. On the other hand, in Kalawewa where the land preparation is mostly accomplished by the Mahaweli Development Board, the demand for labour is least on this account. Although tractor

tillage has resulted in considerable labour savings for land preparation, certain operations that cannot be mechanised still demand intensive use of labour, resulting in a deficit situation during the peaks. For instance, planting, harvesting and related operations demand a large farm labour supply. Data presented here strongly lend support to the hypothesis that the input of household labour alone is inadequate to meet the peak requirements in Polonnaruwa where the overall labour deficit is exhibited in all three major peak operations. Of the three operations definite shortages of household labour are evident only for planting and harvesting in both Kalawewa and Hambantota.

However, a question arises as to the availability of hired labour within the region for the scheduled activities such as land preparation and harvesting. Available local labour is of two types: exchange (attan) labour and hired labour. As mentioned above exchange labour for such activities is not available as every operator is busy with his holding to complete the major work in time. This is evident from the absence of attan labour in the "recipient" areas. With regard to the hired labour, there are two possible sources within the region:

(a) The grown up children of original settlers who are married and live in separate households,

(b) The encroachers or squatters who are often relatives of the farmers or completely outsiders to the region. Both these labour types are likely to rely to some degree on hiring out of their labour to generate at least part of their income requirements.

Since there are several available sources of labour within the region, the hiring of migratory labour appears unnecessary at first sight. However potential sources of local labour are very limited due to the relatively few in number in these categories and their being occupied to some degree with their own farming activities at the same peak periods.

5.2 SUPPLY OF MIGRATORY LABOUR

5.2.1 SOURCES OF LABOUR SUPPLY

The existence of surplus labour in the wet zone at times when labour is in short supply in the dry zone can be explained by two main reasons. Firstly, the peak labour demand periods for land preparation, transplanting, and threshing correspond with a slack period in the wet zone agricultural calendar, which is roughly 2 months ahead of that in the dry zone. Land preparation and transplanting periods in rainfed areas and lands dependent on minor schemes in the wet zone extend from September to November. But the majority of the operators concentrate on these activities in October. On the other hand, in the major irrigation schemes of the dry zone, land preparation and transplanting begin only in November and extend till January. Therefore temporary movements to dry zone areas does not affect their own farm activities.

Secondly, the highly skewed distribution pattern of land availability, high man : land ratio, and the large number of landless people create a considerable labour surplus situation. As discussed earlier the average size of operational lowland holdings across the "donor" sample is small. This has resulted in a high proportion of labour available not being utilized. The proportion of labour available for hire outside the household farm is large. Further, those who are landless are available throughout the year for outside employment and enhance the agricultural labour supply. (Those factors are discussed in greater detail in Section 5.2.2.)

However, in measuring the surplus man power in the "donor" sample households, the available supply has to be analysed in relation to holding size which brings out the greater availability of labour. An attempt is therefore made below to calculate the potential labour availability during the season and total amount of labour input utilised for total operated lowland extent. The gap between total labour utilised and potential labour available during the season is considered to be surplus manpower in the "donor" sample households.

Table 20: Potential workforce, total labour utilised and surplus labour in donor areas.

	(A) Potential work force (Number)			(B) Equivalent standard workers	(C) Extent cultivated of low land paddy	(D) Labour input per acre	(E) Total labour utilized	(F) Potential labour availability during the season (mandays)	(G) Surplus labour (F) - (E) mandays
	M	F	T						
Pethigammana	75	76	151	135.8	9.2	97.5	897	16296	+15399
Peramadulla	82	72	154	139.6	13.3	97.5	1297	16752	+15455
Udupihille-goda	81	64	145	132.2	13.1	97.5	1277	15864	+14587
Kurunegala	73	63	136	123.4	24.4	97.5	2379	14808	+12429
All villages	311	275	586	531	60.0	97.5	5850	63720	+57870

Foot notes

i) A woman day and child day is treated as equivalent to 0.8 and 0.5 manday respectively in derivation of column (B)

ii) Labour input into paddy per acre in respect of Kegalle-Kandy (Ranatunga & Abeysekera) is assumed to be representative of all "donor" villages.

iii) Potential labour availability during the season is calculated based on 20 working days per month for a period of six months.

Consideration of the figures given in column G indicates that the surplus manpower available during the season is much in excess and can be easily released to meet the outside farm labour demand. The potential number of workers available for employment elsewhere is high and we present below a summary of the extent to which sample households were involved in migratory labour.

Table 21: Percentage distribution of migrants in the sample and of working ages

	Peramadulla			Pethigammana			Kurunegala			Udupihillegoda		
	M	F	T	M	F	T	M	F	T	M	F	T
% of migrants in the sample	45.7	43.9	44.9	45.9	39.7	42.7	37.6	30.3	34.2	37.6	3.4	22.1
% of migrants in working ages	59.8	56.6	58.3	54.3	48.4	51.3	45.2	36.5	41.1	45.5	5.1	30.8

The table shows that almost 50% of those in working ages of the sample reported as seasonal migratory labourers. On the other hand, the percentage of female migratory labour varies across the "donor" villages. This may be due to several reasons. Normally females engage in transplanting and harvesting operations; females of Pethigammana, Peramadulla and Kurunegala migrate to Anuradhapura and Polonnaruwa where transplanting is widely adopted. The female component of seasonal migratory labour in Matara district is very low. This may be due to the fact that their recipient region does not practise transplanting widely to require female labour. The reported percentage of female migrants in our study is likely to be an underestimate, since, during the survey period harvesting in Hambantota was yet to be done. Therefore, the opportunity for females of Matara to migrate to Hambantota was not present. From our informal dsicussions it seems that female migration is closely linked with family and friendship relations in the recipient villages. They cannot migrate unless they can find accommodation and security. Most females who migrated to Anuradhapura and Polonnaruwa from the donor villages had some relationship with the recipient households.

5.2.2 FACTORS ENCOURAGING SEASONAL MIGRATION

The factors which encourage individuals to migrate seasonally are discussed below.

(a) Varying man: land ratios

Spatial variations in landownership and tenancy concentrations are positively related with the propensity to migrate seasonally. As discussed under land use and land tenure, the available land for cultivation is low in extent and 12% of the "donor" village households did not own any land. Additionally the income generating potential of highland and homegarden was poor in "donor" villages and most of the highland was under subsistance crops rather than under cash crops. This resulted in poor income levels from lands and compelled many of the operators of these lands to hire out their labour to earn an income to meet day-to-day family requirements.

Further, unequal access to land has increased the propensity to migrate among household members. The traditional custom of dividing the land equally among sons is fast dissappearing. When the amount of parental land is not sufficient to support all sons it is given to one son and others have to migrate in search of work. This is often an important "push" factor for temporary rural migration. The overwhelming majority of seasonal migrants have inadequate land available or insufficient resources to generate income.

Yield data compiled by the Ministry of Agricultural Development and Research (1979) and the per capita rice requirements compiled by the ARTI (1975) showed that in a double cropped rainfed system between half to one acre of paddy would be required to meet the subsistence requirements of an average sized household (about 6 members) in each of the survey locations. If we take one acre as the minimum requirement of a household for subsistence it is evident that the donor villages in our samples fall short of this: only 52.2% of the donor households have operational rights over lowland and 15% of reporting households operate more than one acre of lowland. Those who are not self sufficient in rice need other sources of income to supplement minimum subsistence requirement. Ultimately they are compelled to hire out their labour, if they cannot afford to invest in self employment. Therefore, the household with no operational lowland has a higher propensity to migrate.

This is confirmed from the answers to an open ended question in respect of reasons for wanting to migrate by seasonal migrants (Table 23). Overwhelmingly important were reasons relating to the better work and income/savings - generating opportunities in dry zone areas, with correspondingly negative attitudes towards work-opportunities in the home village. The possibility of "scouting around" for a plot of land to settle in the dry zone appears, however, to have been a relatively unimportant consideration. The financial inducements of the dry zone was for short-term income generating visits rather than with hopes of permanent settlement.

b) Lack of work opportunities in home villages

Seasonal migration reflect the lack of adequate income earning opportunities in home villages. 56.9% of the respondents gave this reason as the cause of their seasonal migration. Competition among labourers for limited agricultural work opportunities in the home village is an important reason for leaving the village seasonally and seeking employment elsewhere. Although non-agricultural alternatives such as timber sawing, beedi (local cigar) wrapping and textile weaving are potentially important factors for income generation, the number of workers engaged in such activities is small over the sample as a whole. Even the seasonality factors of certain agricultural operations in the home village compel many labourers to seek employment outside the village. Although rubber tapping and tea plucking are possible employments in the donor areas, at the village level there may not be the same degree of access to this employment for a larger category of labourers. Further skilled labourers are employed for this activity (on the basis of some understanding of their skill and ability to perform the job) since it requires a certain degree of skill to tap a rubber tree or to pluck tea leaves accurately and selectively. In addition the work is frequently interrupted by heavy rainfall and labourers might have to remain idle for days. Thus some underemployment is inevitable even during the season for those who can find work in the home village. Further it has been noted that a labourer loses

considerable work time in moving from one employer to another. Since seasonal peak operations are linked into a chain of operations carried out in a time sequence, migrants to the dry zone were able to hold a length of employment ranging from 2 weeks to one and half month depending upon the acreage operated by the employer (Table 22). Since the peaks are more defind for the paddy crop, migrants were attracted to dry zone settlements by considerations of both income and length of employment.

C) OTHER FACTORS

Certain non-market forces (especially in those areas where more established seasonal labour movements occur, such as between Matara and Hambantota) are also important. Amongst the young (15-34 age group) "wanderlust" may be an important feature acting as a "push" factor on potential migrants. This can be defined as being the urge to see new places combined with a desire to break away from family ties and routine.[1] In Udupihillegoda, a high number of household members indicated the necessity to be self dependent as an important motive behind the seasonal migration. However this motivation was not a widespread factor.

5.3 METHODS OF RECRUITMENT OF MIGRATORY LABOUR

Migrant labour was recruited in several ways:

a) Recruitment of migrants who are relatives of the operators.
b) Recruitment of migratory labourers who are already known to employers (other than relatives)
c) Recruitment of migratory labourers through intermediaries of contractors
d) Direct recruitment of itinerant labour

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[1] In the Gambia, it has been found that young seasonal migrants give as their main reason for migration the fact that if they remain at home for the whole year, they are often compelled by circumstances to work on their parent's farm with little or no remuneration. Crooks (1978).

Often the farm operators from "recipient" areas call upon potential donor relatives during the peak period, depending on their availability in their native villages in order to supplement family labour. The presence of a considerable proportion of relatives from the wet zone was observed in the areas during the peak period of cultivation: 34% of the migratory labourers reported that they were employed by relatives who have been settled in the dry zone villages.

In some villages the migrants are called upon by operators who have already established contact with migratory labourers. But, such migratory labourers were not essentially from ancestoral villages of the operators. 19% of the migratory labourers were of this nature. Operators also prefer to employ such labour since their skill, ability and productivity are already known to them.

The third source of seasonal migratory labour is found in labour contractors and intermediaries. Migratory labourers who are traditionally considered to be efficient specially in the Kurunegala district were recruited through labour contractors or intermediaries. Such labourers constituted 12% of the migratory labourers in the "recipient" areas.

Fourthly, a high proportion of itinerant labour could be found in the "recipient" areas, wandering around looking for possible employment during the peak. They constituted 34% of the seasonal migratory labourers, in the dry zone villages.

The above classification strongly suggests that the initial family and "home village" links, which must have been the most important procedure for recruiting migrant labour, are being gradually replaced by a more strictly commercial - based type of transaction. It is noteworthy that seasonal migration does not appear to have declined in volume with the inevitable weakning of distant family links over time. On the contrary, commercial links have successfully developed, now accounting for more than two-thirds of the observed employment contracts. For future dry zone development strategy this trend must be viewed in a positive light for two reasons: first, it indicates a resourcefulness on the part of

dry zone farmers in obtaining labour to meet shortfalls; second, it suggests that a strong commercially-based market for migrant labour exists which it may be possible to strengthen or expand with for the development of the dry zone.

5.4. WAGE DETERMINATION OF MIGRANTS

In both the "donor" and "recipient villages information was collected on the wage rates paid to migratory labourers. The "donor" village wage rate was determined from the wage reported by the migrant on his return plus the food cost whilst working. Most migrants were given food and lodging whilst working in the "recipient" regions.

In addition to food, migrants were provided with beedi (tobacco), betel, soaps, tooth paste, razor blades and even liquor in order to maintain the work efficiency during their stay. All migrants enjoyed free lodging since it is customary among rural folk to provide lodging for a stranger.

Although the actual food cost is not deducted by the employer from wage, the following rates were added to the daily wage rate on the basis of the modal daily food cost reported by employers.

3 meals per day	Rs.5.00
2 meals per day	Rs.3.00
1 meal per day	Rs.2.00

For "recipient" villages the wage rate reported by the employers was recorded together with the above cost estimate for food, provided the number of meals given ultimately being taken into account as part of the remuneration. Even though one would expect to find uniform wage rates for seasonal labour within a village, the survey indicates varying levels of wages even within a survey location. Presence of differential wage rates is partly based on the recruitment procedure adopted by the employers as discussed in the section under labour supply. Other reasons include:

i) The presence of related migrant labour in the recipient region influenced the wage rates in the region. It is reasonable to argue that employers do not assign specific activities to this type of migrant to be completed within a given period of time. The payments are not essentially made for them on a day's work basis or piece-work basis but a lump sum is paid to migrants on the day they leave for the home village. In addition, to maintain goodwill and mutual understanding with relatives, the employer sometimes provides several measures of rice etc. The indirect effect of this process is that employers are in the position of paying a smaller amount of money, without causing any inconvenience to migrants. Since the final payment is regarded as a net saving by the migrants, there would be hardly any haggling over wage rates with their related employers.

ii) If the labourers are experienced migrants who have already established contact with the employers, the employers prefer to employ them at a relatively higher wage rate. The employer sometimes sends cash advances to ease their initial expenses. It is interesting to note that hardly any of these advances are deducted from the final payment. Therefore, the migrants of this kind enjoy a certain component of fringe benefits, receiving transport cost for the journey as well as cash advances, without any uncertainty. Invariably, the migrants leave with some bargaining power over the wage issues. In keeping with the idea of employing efficient labour to finish up the work in time, the employers are also inclined to pay them well, to safeguard future labour supplies.

iii) The migrant labourers who are recruited through contractors or intermediaries do not directly bargain with employers over the wage issues. The contractors who recruit the labourers determine the wage rates of his labour gangs. Most contractors employ labourers on a piece rate basis so as to increase their work efficiency and in order to extract a substantial commission from them. In addition contractors charge 10% commission from the employers. However, the income of migratory labourers who were recruited through contractors is relatively high compared to other categories of labour,

since, their income is a result of group effort. Further, the contractors have some bargaining power for a higher payment per acre as the efficiency of migratory labour is well recognised.

iv) The most deprived group of migratory labourers were referred to itinerant labour. Employers show some reluctance towards employing strangers because they have to accommodate those migrants in their homes unless suitable accommodation could be provided in the field itself. Several cases were reported of disappearance of strangers with valuables. Therefore, a certain degree of monopsony power lies with the employer in fixing the remuneration for an itinerant labourer with the result that he would receive barely satisfactory treatment contrary to what is usually extended to a hired labourer.

Further, the data collected on wages display noticeable variation in each survey location on the basis of different types of operation. The average daily wage rate for migratory labour for reported operations (with exception of aftercare operation and agrochemical application which were rarely reported as having been carried out by migrants) are given in Table 24. Although the same migratory labourer was engaged in different operations the wages differed from one operation to another.

Tight cultivation time tables often compel employers to treat labourers with some care, especially during major work periods such as the land preparation and harvesting, when the employer is anxious to keep his labourers with him. One important way is to pay higher wages for those two operations than for the other operations which are not so time-specific. Therefore, because of the demand factor a considerable gap between wage rates for land preparation and harvesting cannot be seen. However higher wage rates were paid for operations such as agro-chemical application due to risk and the special skill involved in such operations.

Although women are technically more efficient than men in certain operations such as transplanting and stacking, adult male workers were paid the highest daily wage rate for each operation. There was no particular wage distinction for harvesting and stacking between males and

females in certain locations. However, transplanting was the lowest paid operation and was one in which women were heavily involved. Table 25 shows the local wage rates within each of the survey areas, i.e. the "going rate" for hired labourers working at Peramadulla, Pethigammana, Kurunegala and Udupihillegoda and the wage rate for local labour in Kalawewa, Polonnaruwa and Hambantota.

The general tendency was that wage rates reported by "recipient" farmers as having been paid to the migrants are generally higher than those reported by the migratory labourers themselves. This could be because firstly migrants might report lower wage rates than those actually earned in order to give exaggerated account of their low income, and secondly, recipient farmers might have inflated the wages they actually paid to the labourers so as to give an inflated idea of their costs. However, error resulting from exaggeration/under estimation seems to be minimal, since certain cross checks were carried out to ensure data-validity.

It can be seen that the difference between migratory wage rates over local rates within "donor" villages resulting from migration ranges from 53% in Pethigammana for men to 130% for women migratory labourers from the same district. These large differences in wage rates probably constitute an important "pull" factor acting on labourers in the wet zone and drawing them into the dry zone.

As expected, the differences between local wage rates and wage rates reported by "recipient" farmers within the "recipient" areas are small, but are large between donor and recipient areas indicating that the shortfall in labour supply in dry zone localities has raised the cost of labour, both seasonal migratory labour and local labour to the same level. At the same time in the "donor" villages, a surplus of labour has depressed the local wage rates there.

Our analysis of wage rates brings out clearly the large differential between what is paid in the dry zone and what could have been received by the same (migrant) labour in the wet zone at the same point in time.

Wet zone wages, on the whole, are between one half and two thirds of the migratory rate. Even allowing for the fact that part of this difference must be an inducement to travel long distances, the bulk of the disparity must be taken to reflect differences in the respective marginal productivities of labour in wet and dry zones at the times in question. In fact, there are grounds for supposing that the real value of labour between the two zones are more widely different than the wage rates suggest. Peak agricultural seasons in the dry zone generally correspond with the slack seasons in the wet zone (the latter season being some two months ahead of the former) suggesting that the opportunity cost of migrant labour in the wet zone may be nearer to zero than to the reported current wage levels. In the dry zone, on the other hand, it is highly unlikely that farmers would employ labour at higher than their average or marginal productivities.

We must conclude, therefore, whilst the difference in current money wage rates between wet and dry zones are currently large, differences in real values of labour to the national economy are likely to be even larger.

Table 22: Duration per visit of migrant labour by operation and village

Village	Operation	Reporting-migrants									
		Days 10-20		Days 20-30		Days 30-45		Days over 45		Average length of employment(days)	
		M	F	M	F	M	F	M	F	M	F
Kurunegala	Land preparation Broadcasting Transplanting	20	15	11	10	03	02	01	01	22.32	22.93
	Harvesting/ Stacking	06	02	05	01	02	-	-	-	22.88	18.00
	Threshing										
Pethigammana	Land preparation Broadcasting Transplanting	47	24	19	15	04	01	-	-	17.40	19.88
	Harvesting/ Stacking	18	07	22	03	02	-	-	-	23.38	18.00
	Threshing										
Peramadulla	Land preparation Broadcasting Transplanting	67	20	16	20	06	06	-	-	16.99	24.26
	Harvesting/ Stacking	01	12	01	06	06	-	-	-	21.17	15.50
	Threshing										
Matara	Land preparation Broadcasting Transplanting	58	-	05	-	01	-	-	-	11.74	-
	Harvesting/ Stacking	18	01	01	-	-	-	02	-	17.48	7.00
	Threshing										

M=Male F=Female

Table 23: Reasons given in donor villages for working as seasonal migrants

Reason	Perama dulla	% of total house holds	Pethi-gammana	% of total house holds	Kuru-negala	% of total house holds	Udu-pihille goda	% of total house holds	Total	% of all households
1. Lack of work opportunities in home village	35	100.0	24	75	35	100	25	71.4	119	86.9
2. In order to save money	14	40.0	12	37.5	4	11.4	21	60.0	51	57.2
3. To be self dependent	8	22.9	15.6		-	0	28	80.0	41	29.9
4. To earn money for buying clothes and other consumable goods	23	65.7	11	34.4	5	14.3	1	2.9	40	29.2
5. Landlessness	-	0	-	0	4	11.4	14	40.0	18	13.1
6. To obtain lump sum of purchase of durable goods	5	14.3	3	9.4	-	0	8	22.9	16	11.6
7. To earn money for children's education	3	8.6	5	15.6	3	8.6	3	8.6	14	10.2
8. To encroach & then to become a land-owner	1	2.9	11	34.4	-	0	1	2.9	13	9.5
9. Settlement of loans	9	25.7	-	0	2	5.7	1	2.9	12	8.8
10. Reluctance to work locally as hired labourer	2	5.7	3	9.4	-	0	5	14.3	10	7.3
No. of households	35		32		35		35		137	

Table 24: Daily wage rates for different operations

Operation	Sex	Pera-madulla	Pethi-gammana[a]	Kurunegala		Udupihi-	Kalawewa	Polonnaruwa[b]	Yodakandiya
				Daily	Contract				
Land preparation	Male	12.85	12.10	14.05	15.32	13.53	12.50	13.49	14.90
Nursery preparation	Male	12.95	12.29	12.81	14.17	13.53	12.81	-	14.67
Transplanting	Male	-	-	13.19	15.12	-	-	16.00	14.00
	Female	11.24	10.68	11.12	14.85	-	12.85	12.00	14.00
Agro chemical application	Male	15.00[1]	-	-	-	-	-	15.00	-
	Female	-	-	-	-	-	-	-	-
After care operations	Male	15.00	-	-	-	-	-	13.67	-
Harvesting/stacking	Male	12.95	12.24	11.90	16.96	13.02	14.58	15.76	-
	Female	-	12.33	11.86	15.00	11.75	13.33	12.43	15.00
Threshing/ winnowing	Male	13.02	12.26	14.22	-	15.00	18.70	13.82	15.00
	Female	-	-	-	-	-	13.00	-	-
Chena cultivation	Male	-	-	-	-	11.49	-	-	-

1 = High due to risk of not finding employment; the demand for hired labour for agro-chemical application is small.
a)= 4 villages which reported the wages they received
b)= 3 localities which reported the wages they paid

Table 25: Daily wage rates in all survey locations

	Perama dulla	Pethiga-mmana	Kurunegala		Udupihil-legoda	Kalawewa	Polonn-aruwa	Yodakan-diya
			Daily rate	Contract rate				
Migratory rates[d] men	12.94	12.22	13.23	15.39	13.68	14.64	14.76	14.64
Women	11.24[a]	11.51	11.49	14.92	11.75[b]	13.17	12.22	14.50
Local rates[c] men	8.00	8.00	7.00	-	10.00	15.53	13.73	13.02
Women	5.00	5.00	6.00	-	7.00	12.93	12.50	14.62

Notes = a - All for transplanting

b - All for harvesting/threshing

c - Including food

d - As three meals per day were taken by all migrants, the cash element of the reported daily wage rate can be obtained by subtracting Rs.5/- from each of the above figures.

CHAPTER V

CONCLUSIONS

6.1 SUMMARY OF FINDINGS

1) Seasonal labour migration movements connected with paddy production occur predominantly from the wet zone to the dry zone at periods of peak labour demand, namely around the times of land preparation, transplanting, harvesting and threshing. This corresponds with a slack period in the wet zone agricultural calendar, which is some 2 months ahead of that in the dry zone.

2) The seasonal migrant labourers may be broadly divided into two categories, daily paid and contract workers. Daily paid workers who form by far greatest proportion of the total seasonal labour force are mostly people who have social or traditional ties with distant villages and they may migrate more than once in any one season for employment on the different agricultural operations. There is a tendency for contract workers to be more specialised in the work that they do, e.g. women from Kurunegala district are widely known as being efficient transplanters of paddy. Organised gangs of them are preferred by "recipient" cultivators in the dry zone where they are much sought after. Even so, they are in the minority when considered as a part of the total seasonal labour migration movement.

3) There is difficulty in establishing the extent to which middle-men and agents are involved in these movements, but they certainly do exist and those who were traced seemed to find it a profitable occupation.

4) Household incomes were found to be much greater in the dry zone "recipient" villages than in the wet zone "donor" villages.

5) In the "donor" villages there is surplus of labour available for seasonal work, and most migratory labourers found no problem with obtaining employment in the dry zone.

6) There is a short-fall in the local supply of hired labour in the dry zone. The larger holding sizes being the main reason why the "recipient" villages need to employ labour from the wet zone.

7) Seasonal migrants usually obtain higher wage rates for given operations than they would obtain from work locally as hired labourers. This is thought to be caused primarily by the surplus of such labour within the wet zone. The real value to the economy of dry zone vis a vis wet zone labour at the time migration occurs may be even wider than the wage differential suggests.

8) The income resulting from seasonal migration forms a large proportion of the total income of households of the migrants.

6.2 POLICY ISSUES

Our intention at the start of this study was to place seasonal labour migration into the broader context of economic development in wet and dry zones. The dry zone is characterised by higher rewards to farming, and lower unemployment. In contrast the wet zone has a superior infrastructure and a stronger lure of permanent or semi-permanent employment in government or commerce. Permanent migration to the dry zone, for these reasons is initially sluggish, but appears to have gained momentum. However such migration remains strongly tied to the availability of irrigated land. For as long as this settlement pattern continues, farm families will be heavily involved in their own work, with labour deficits at peak periods even on the 2½ acres paddy plots currently envisaged, and the chronic seasonal deficit of labour in the dry zone will continue.

In our introductory chapter, three sets of issues, or "working hypotheses", were identified. We can now summarise the conclusions under each of these before proceeding to a more general discussion

of policy perspectives.

1) Financial and economic discrepancies in seasonal labour values between wet and dry zone

Our findings show clearly that, at the time of migration, wet zone wages are between one-half and two-thirds of what could be obtained in the dry zone. A detailed investigation into the real value, to the national economy of a day of hired labour work in wet and dry zones at the time of migration lies beyond the scope of this study. Drawing on the findings of this and of other studies, we suggest,however, that the real difference in social prices may be larger than that reflected in money wage differences. There is no reason to suppose that this gap, which forms the basis for seasonal migration, will be narrowed in the short or medium-term, since labour - saving technologies for the operations in question are not even on the horizon (see Farrington & Abeysekera, 1979; Farrington et al, forthcoming), and the resident dry zone labour force available for peak season employment is unlikely to rise, since the bulk of potentially available labour in the dry zone is, and will continue to be, engaged in farming activities of its own.

2) Income - distribution and production effects

Our findings suggest that the typically short periods (Approx. 20 days/ visit) for which wet zone labourers migrate (and for which the peak operations and the dry zone require their presence) are fully compatible with their current diverse pattern of income - generating activities and their desire to remain based in the wet zone. The proportion of income attributable to earnings from migration is high (typically between 30% and 60%) and it seems reasonable to suppose that migration represents a livelihood enhancing opportunity for such labour; it is a transfer of wealth from relatively affluent dry zone to relatively poor wet zone, with a corresponding reverse flow of productive effort having potentially higher returns in the dry zone than in the wet zone at the observed times of migration. It therefore appears to fulfil both production and

income distribution goals. How migratory movements might develop for the future is a broader question which is discussed below.

3) Future prospects for migratory labour

This is the most difficult area in which to make clear predictions, yet it is the most crucial for policy makers. We shall consider first the likely potential demand for such labour.

Future demand

We have suggested in general terms that the available pool of seasonally employable labour resident within the dry zone is likely to increase only slowly, if at all, since future settlement policies will, as in the past, allocate a land holding for which individual farm families will be unable to supply adequate labour to meet peak requirements. Similarly, younger generations of traditional villagers or of earlier colonists will be seeking a plot of their own of a comparable size to earlier holdings in the land-abundant dry zone. Estimates of the likely future demand for seasonal hired labour in such major dry zone developments as the Accelerated Mahaweli Programme have been made by Abeygunawardena (1979) on the basis of a long term analysis by NEDECO consultants. A re-interpretation of these predictions, on the basis of current trends in areas already settled in the dry zone, has been attempted by Fieldson and Farrington (1980). Their findings suggest that the figures provided by Abeygunawardena strongly underestimate the labour inputs likely to be necessary to achieve postulated paddy yields. This underestimate is particularly strong in respect of hired labour, where the estimated requirement of 30 mandays per 2½ acres of paddy is far below that of 138 days estimated by Fieldson and Farrington from a regression analysis of observed pattern of labour use against net revenue in existing settlement schemes. Aggregation of their estimates to the Accelerated Mahaweli paddy area as a whole suggests that some 400,000 labourers will be needed to meet peak season requirements. This is a conservative estimate since the assumption on which it is based (50 mandays of work/labourer/season) appears to be on the high side. Any reduction in the average period of employment per worker will clearly produce a proportional increase in the number of labourers required.

The breakdown of this total between locally available and seasonally migrant is problematic. Our data from Kalawewa, Hambantota and Polonnaruwa suggest a migratory component of 87%, 96% and 86% respectively, but those figures should be interpreted with some caution since they are drawn from samples selected purposively for their known employment of migrant labour. Even if the migrant component is taken to be 75% of the total hired labour input, or even 50%, than the number of labourers required will be 200,000 - 300,000 in the next decade, and these figures will be underestimated in so far as the employment period per worker is less than the 50 days criterion adopted.

Future supply

The capacity of the wet zone to meet such enormous migrant labour requirements is difficult to predict. Since the typical employment pattern of manual labourers in the wet zone is casual, short-term and piece-meal, little would be gained from an analysis of official unemployment statistics. Similarly, the willingness to migrate will depend to some degree on considerations of relative remuneration levels, security, convenience and, now to a lesser degree, on family links, and so is difficult to predict in concrete terms.

What does deserve attention is the extent to which alternative manual employment opportunities are becoming available within the wet zone. As noted in our introduction, Moore & Wickramasinghe (1980) suggested that such employment prospects were strictly limited. That view must be revised, however, in the light of the direct and indirect labour market effects of government policies since 1978. These have produced "urban-based" trends with a boom in construction and expansion of the tourist industry, and the services sector. Efforts to develop an Export Promotion Zone in the vicinity of Colombo have led to an expansion of manual employment opportunities there. Wage rates in these parts of the wet zone have risen correspondingly.

On the other hand, the stagnant employment prospects noted by Moore and Wickramasinghe (1980) appear to prevail in many other parts of the wet zone, and the recent decline of the handloom weaving industry, traditionally a large employer, must have exacerbated this trend.

Casual manual labour in the wet zone thus appears to be faced with, employment opportunities in both prosperous areas of the wet zone, and in dry zone settlement. For those with skills, a third avenue, employment in the Middle East, has recently opened.

To analyse whether the huge requirements for seasonal migratory labour that we have outlined are unlikely to be met as a result of these alternative employment opportunities, would require a monitoring effort beyond the resources of this study.

What we would suggest in conclusion is that a spatially distributed programme of monitoring wage levels and reports of manual labour availability in both prosperous and poor areas of the wet zone, and in dry zone settlement, needs to be established and interpreted in the light of this problem. The requirement for labour in the dry zone is highly time-specific, and the indications are that large net increases in paddy production are attributable to the employment of such labour. Some increase in dry zone wages would make employment there more attractive than elsewhere at peak periods. On the other hand, if the market fails to obtain the necessary labour for the envisaged intensive exploitation of irrigated land, then extensive and labour-sparing practices are likely to be adopted, generating lower returns than anticipated from the massive investments in irrigation infrastructure. It may thus be worthwhile for policy initiatives to be implemented with the express purpose of securing adequate migratory labour supplies.

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