BTE Publication Summary

Australian Rail Freight Movements 1979/80

Information Paper

This Information Paper identifies for 1979-80 the freight movements which occurred on Australian railways and the sizes of particular flows. To a large extent this Information Paper represents an update of an earlier Bureau of Transport Economics (BTE) publication entitled Australian Rail Freight Movements, 1975-76.









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FOREWORD

This Information Paper identifies for 1979-80 the freight movements which occurred on Australian railways and the sizes of particular flows. To a large extent this Information Paper represents an update of an earlier Bureau of Transport Economics (BTE) publication entitled Australian Rail Freight Movements, 1975-76.

The basic data for this Information Paper have been supplied by the various government and non-government railways, and their cooperation has been much appreciated. Details for the government railways were obtained either in the form of magnetic tapes of freight consignments which were then processed by the BTE, or as assembled statistical aggregates of freight movements. Non-government railways were asked to provide details only of the principal commodities carried and the lengths of line in use.

All government railway figures prepared for this Information Paper have been circulated to the systems concerned for comment, but any errors which appear remain the responsibility of the BTE.

The collation of numerical data for this Information Paper was undertaken within the Systems and Information Branch by Mr T.G. Mikosza and Dr J.A. Ascione, assisted by Mr M. Poole.

The assistance of Mr B. McDowall of CSIRO Division of Computing Research in processing the magnetic tapes containing the basic freight flow information is gratefully acknowledged.

J. W. MOLL Assistant Director Systems and Information Branch

Bureau of Transport Economics Canberra December 1982

SPECIAL NOTE

Certain tables presented in this Information Paper relate to interregional freight flows using regions which are based on Statistical Divisions used in the 1976 Census of Population and Housing. In addition, similar tables have been prepared which are based on National Travel Survey (NTS) Regions. These tables are not presented in the Paper but are available in microfiche form from:

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CHAPTER 1—INTRODUCTION

This Information Paper presents a range of statistical information setting out the principal features of freight flow movements over Australian railways in the year ended 30 June 1980 (ie the fiscal year 1979-80). An earlier study presenting somewhat similar information was previously carried out for 1975-76 (BTE 1979). Most information in this Information Paper is presented in tabular form as consignments from particular systems, regions and line sections, while visual presentations show summarised consignment figures transformed into freight flows along principal rail lines. This study was carried out as part of continuing BTE work aimed at presenting factual information on freight movements for a wide range of uses.

It is not the purpose of this Information Paper to analyse in detail the figures presented, although some brief comment has been included in the text where it is considered sufficiently important and appropriate. No attempt has yet been made to interpret the movement patterns revealed, but further BTE work on these aspects is in progress.

This chapter outlines the concepts and definitions which have been adopted in producing the estimates of freight tonnes moved over Australian railways in 1979-80. Details as to how the estimates were obtained are set out in Appendix I.

RAILWAYS

Government

Ownership of government railways in Australia is with State governments or the Commonwealth Government¹.

The respective State-owned railway systems in 1979-80 were under the authority of:

- Public Transport Commission of New South Wales (PTCNSW)²;
- Victorian Railways (VicRail);
- Queensland Railways (QR);
- Western Australian Government Railways Commission (Westrail); and
- State Transport Authority-Rail Division, Adelaide (STA)³.

Commonwealth-owned railways are managed and operated by the Australian National Railways Commission (AN), a statutory authority established on 1 July 1975 to take over the former Commonwealth Railways and the previously State-owned South Australian non-metropolitan and Tasmanian networks. AN's operations in 1979-80 comprised:

 a South Australian-based network, which has been divided in this study into Central Region (the previous South Australia Railways) and Northern Region (the previous Commonwealth Railways) because the available data reflected this distinction;

^{1.} Government-owned railway systems have set up an organisation called Railways of Australia (ROA) to promote the various railway systems as an integrated network. ROA should *not* be confused with the term 'Australian railways' used in this Information Paper to describe both government and non-government railways.

^{2.} The rail division of the PTCNSW had its name changed to State Rail Authority of New South Wales on 1 July 1980 following changes in the administration of public transport systems in NSW.

^{3.} Operates metropolitan Adelaide passenger services only.

- Tasmanian Region; and
- Australian Capital Territory Railway.

Each of the government railway systems is described in greater detail later.

Non-government

Non-government railways are usually single railway lines which are owned by independent business undertakings and built for the express purpose of carrying a particular commodity. Many such lines exist in Australia and those selected for inclusion in Chapter 2 of this Information Paper all have route lengths of more than 2 km and extend outside industrial estates, harbour precincts, and mines and quarries.

It is not a pre-requisite for a non-government railway to have its own rollingstock. For example, some non-government lines which feed traffic to government lines are worked by government railway locomotives at a cost to the business undertaking owning the line.

Details of the non-government railways included in this Information Paper are shown later.

FREIGHT

Freight in this study is defined to be all revenue-earning freight which has been carried by rail. In the case of non-government railways this is taken to include the commodities which they were built to carry.

For government railways, freight includes details of all consignments handled, as obtained from magnetic tapes, manually-extracted summaries from station masters' returns, and so on. For all practical purposes the freight consignment data approximate total revenue traffic, although it is known that some insignificant quantities of noncharged railway-owned freight sent as part of the normal freight despatch system have been included for some systems. For the purpose of this study, it was sought to exclude the following components of freight provided by railway systems:

- departmental traffic, as so described by the individual railway systems; and
- supporting road services traffic operated by government railways.

In 1979-80 three road traffic services were operated by government railways as follows:

- Westrail's mineral sands by road from Capel to Bunbury;
- · Westrail's road freighter services; and
- AN Central Region's road motor traffic.

With the single exception of Westrail's mineral sands movements by road (which totalled some 295 000 tonnes in 1979-80), the size of these movements (excluded from the estimates presented in this Information Paper) is small when compared to the total tonnes moved by the respective systems.

CONSIGNMENTS

For railways, a *consignment* represents a despatch of freight from one station or associated siding to another. This freight is documented using a freight consignment note.

In some cases, for reasons of operational convenience, the railway system may record one consignment as two separate movements. This may occur with some export coal movements when the movement to the coal loaders from nearby marshalling yards is counted as a separate movement distinct from the movement of the coal from the mine to the port. This practice leads to an overestimation of freight moved as the coal, in the instance quoted above, is counted twice.

UNITS OF FREIGHT ESTIMATES

The government railways record all freight consignments in mass tonnes, and count the numbers of livestock carried. Conversions of the number of livestock to tonnes are made using the following figures that have been adopted by all railways;

- cattle and horses-500 kg or 2 animals per tonne
- calves—100 kg or 10 animals per tonne
- sheep-40 kg or 25 animals per tonne
- pigs-50 kg or 20 animals per tonne
- other livestock-100 kg or 10 animals per tonne.

Apart from some estimates in Chapter 2 shown in units of millions of tonnes, all estimates given in this Information Paper are shown in units of one thousand tonnes.

SYSTEM AND STATE

While every non-government railway is confined within State boundaries, some State and Commonwealth-owned railway systems cross State boundaries. Details of border crossing points are shown in Figure 2.4.

As 1979-80 data for AN have been compiled from different sets of records for the Central and Northern Regions respectively, the results for these regions are presented separately in this Information Paper as if they were separate systems. Separate figures are also presented for AN's Tasmanian Region and ACT Railway which are spatially removed from the SA operation.

By contrast, the term 'government railways in NSW' refers to all government railways in that State, namely, those belonging to the PTCNSW, VicRail and AN systems¹. Historically, State boundaries have remained fixed while some systems have undergone changes in their areas of operation. Freight consignments presented on a State-basis would be the most satisfactory means of comparing freight activity from year to year².

ORIGINS AND DESTINATIONS

The consignment note raised to cover a particular consignment of freight by rail shows both the station of origin and the station of destination. For movements which occur wholly within one particular railway system, the records on the freight consignment magnetic tapes (which were the source of data for this study) showed both stations of origin and destination. For movements between two systems, each system records on its magnetic tapes the tonnage carried with the first system showing a movement from the station of origin to the intersystem transfer point, and the second system recording a movement from the intersystem transfer point to the station of destination. As the freight consignment magnetic tapes were the basic records used in this study, only an incomplete picture of *intersystem* movement was obtained.

Intersystem freight accounting procedures are about to undergo a change with the introduction of a centralised computer based accounting and information system (RADAR)³ in Melbourne, to process all mainland intersystem freight transactions for ROA under uniform commodity codes. It is envisaged that in future studies of this kind the necessary intersystem origin and destination information will be available from RADAR.

It was not possible from an examination of the railway freight accounting records used

¹ More details of these lines appear in Chapter 2.

This Information Paper is one of a series of BTE publications dealing with Australian freight movements, earlier publications being for 1971-72 (BTE 1976) and 1975-76 (BTE 1979).

³ Railways of Australia Documentation, Accounting and Reconciliation (RADAR).

in this study to separately identify those freight movements which passed through regional freight centres and so travelled part of the way by rail and part by road.

REGIONS

Regions as defined in this study usually correspond to the *Statistical Division* (SD) boundaries which were used for the 1976 Census of Population and Housing by the Australian Bureau of Statistics (ABS). In two States, NSW and Tasmania, regions correspond to *Statistical Subdivisions*. In SA, the Northern SD has been split for this study into two portions called North East and North West regions. Separate regions are defined for Port Augusta-Whyalla, Mt Victoria (in the Outer Sydney SD), Albury-Wodonga, Canberra and Queanbeyan.

In this study, regions have been given unique three-digit numbers by the BTE. Appendix II shows the regions that have been selected for study in each State¹.

The BTE has also developed another set of regions which are called National Travel Survey (NTS) Regions. Details of these are set out in another BTE publication (Aplin and Hirsch 1978). The basic source data used for this study have been reworked to produce details of movements between NTS regions and results in microfiche form are available on request to the BTE (see Special Note).

LINE SECTIONS

For the purposes of this study, the railway lines located within each region were considered as having been made up of one or more line sections. This concept, which involves the aggregation of freight movements to and from (respectively) all stations located in the line section, makes the task of analysing freight movements much simpler than if movements at every individual station had to be considered. The total line section movements are attributed to a particular node which in most instances is the station on the line section handling the largest tonnages. The reader should note that, in the context of line section movements, the estimates of freight movements through the line section node are greater than the movements at the railway station of the same name since the freight consignment to and from other stations in the line section is included in these estimates.

Maps showing the extent of the line sections located within the regions of each State are set out in Appendix III.

COMMODITIES

Each government railway system has its own freight commodity classification and, in addition, there is a separate ROA commodity classification which applies to most commodities that are carried between systems. For this study, the BTE developed a much abbreviated commodity classification² into which the commodities as defined by the individual railway systems were included in a consistent manner. The standardised commodity classification system³ used in this study is as follows:

Bulk liquids

- 11 Petroleum
- 12 Chemicals (liquid)
- 13 Molasses
- 14 Water

1. The Northern Territory has not been divided into regions as railway operations now extend only as far north as Alice Springs.

 It was not possible to classify commodities according to the Australian Transport Freight Commodity Classification (ATFCC) (ABS, 1982a) because many individual railway freight commodity items contained goods belonging to more than one ATFCC commodity item.

3. The two digit numbers shown represent codes used to facilitate the classification process. The items given these codes are referred to as 'standardised commodities' throughout this Information Paper. These standardised commodities are shown listed within 'commodity groups'.

- Minerals
 - 21 Coal (defined to include coke, briquettes and char)
 - 22 Other minerals
 - 23 Construction materials
 - 24 Smelted products
- Grains
 - 31 Wheat
 - 32 Other grains (defined to include raw sugar and bulk refined sugar)
- Other bulk solids
 - 41 Cement
 - 42 Fertilisers
 - 43 Sulphur
- Livestock
 - 50 Livestock
- Steel
 - 60 Steel
- Pre-packed freight
 - 71 Containerised freight
 - 72 Freight forwarders traffic
 - 73 Bulk loading
 - 74 Trailers on flat car
- Other non-bulk freight
 - 81 Timber (defined to include logs, woodchips and firewood)
 - 82 Fruit and vegetables
 - 83 Wool
 - 84 Road vehicles
 - 85 Empty containers
 - 86 Sugar cane
 - 89 Other non-bulk freight not classified by 81-86

PRINCIPAL FLOWS

Many of the figures quoted in this Information Paper are in terms of 'principal flows'. As a general statement, a principal flow as defined in this study constitutes an annual movement which, when considered in terms of line sections of origin and destination, amounted to 500 tonnes or more in respect of any standardised commodity. Because the total freight consigned on any system consists mainly of high tonnage movements between individual pairs of stations or sidings, these principal flows account for virtually all of the rail freight consigned in Australia. In this study, the aggregation of all principal flows of government systems produced a figure that was approximately 99 per cent of total consignments. Details of the actual manner in which principal flows were derived are set out in Appendix I.

CHAPTER 2—ROUTE CHARACTERISTICS AND FREIGHT TRENDS OF AUSTRALIAN RAILWAYS

The total freight consigned on Australian railways in 1979-80 amounted to a record 239.9 million tonnes, which was 104.8 million tonnes more than the quantity handled ten years earlier (135.1 million tonnes in 1969-70). During the decade, the non-government railways' share of total consignments rose from some 47 per cent in 1969-70 to over 58 per cent in 1974-75, then fell to 52 per cent by 1979-80. While non-government railways' consignments almost doubled in the decade to 1979-80, government railways' consignments increased by one half. Figures of tonnes consigned by government and non-government railways in the years from 1969-70 to 1979-80 are shown in Table 2.1, and the trends are illustrated in Figure 2.1.

Of the total of 239.9 million tonnes consigned by Australian railways during 1979-80, minerals made up 73.8 per cent, or 177.1 million tonnes. Iron ore consignments were 90.0 million tonnes, or 50.8 per cent of all mineral movements, and constituted the largest Australian movement of any single commodity. By far the largest proportion of iron ore was carried by non- government railways in north-west Western Australia. Coal, which included smaller quantities of briquettes, coke and char, followed with 56.7 million tonnes consigned. Coal was the leading product in tonnage terms carried by the government railways.

Grain consignments amounted to 20.1 million tonnes in 1979-80. This tonnage included 15.7 million tonnes of wheat and 4.3 million tonnes of other grains. Other grains included 1.2 million tonnes of raw and refined sugar consigned on QR and 0.3 million tonnes of raw sugar consigned on Queensland sugar tramways¹. Sugar cane carried on the tramways amounted to 17.9 million tonnes.

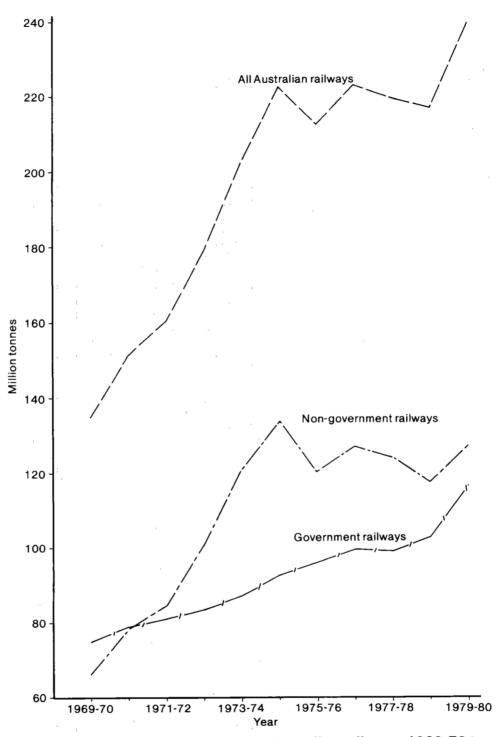
(million tonnes)						
Year	Government railways	Non-government railways	All Australian railwaysª			
1969-70	75.5	66.1	. 135.1			
1970-71	79.0	78.8	151.6			
1971-72	81.6	84.8	160.3			
1972-73	83.8	100.8	178.4			
1973-74	87.3	121.3	202.4			
1974-75	92.7	134.0	222.6			
1975-76	96.0	120.5	212.7			
1976-77	99.5	127.0	223.1			
1977-78	98.6	124.0	219.8			
1978-79	102.5	117.7	216.6			
1979-80	116.7	127.2	239.9			

TABLE 2.1—AUSTRALIAN RAILWAYS; ESTIMATES OF FREIGHT CONSIGNED, 1969-70 TO 1979-80

a. Freight consigned over both government and non-government railways is counted once only.

Sources: ABS, BTE, Department of Transport and Construction (previously Department of Transport).

1. The only grain consigned by non-government railways.





8

Chapter 2

Other non-bulk freight included a wide range of commodities which accounted for some 8.3 million tonnes. This was followed by pre-packed freight, including containers and freight forwarders' traffic, amounting to 5.2 million tonnes. Other large consignments included steel (3.1 million tonnes), petroleum products (2.5 million tonnes), fertilisers (2.0 million tonnes) and cement (1.7 million tonnes).

The breakdown by principal commodities of the total freight consignments on Australian railways is illustrated in Figure 2.2. An expanded list of principal commodities by tonnes consigned by both government and non-government railways is set out in Table 2.2.

vernment railways 	All railways ^a 2.5 0.4 2.9
	0.4
	0.4
_	2.9
7.7	56.7
88.3	90.0
12.8	30.5
108.8	177.1
_	15.7
0.3	4.3
0.3	20.1
	1.7
	2.0
_	3.8
	1.3
-	3.1
	5.2
17.9	18.1
0.1	8.3
18.0	36.1
127.2	239.9
	88.3 12.8 108.8

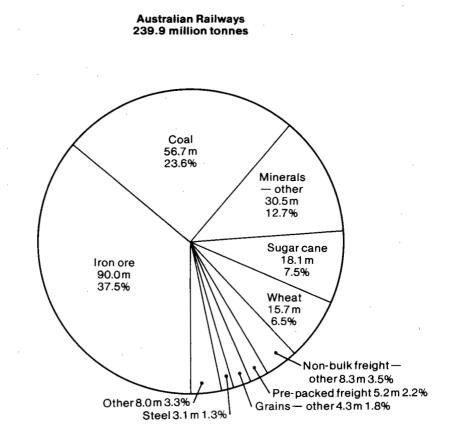
TABLE 2.2—AUSTRALIAN RAILWAYS; ESTIMATES OF COMMODITIES CONSIGNED, 1979-80

a. Tonnes consigned over both government and non-government railways are counted once only.

NOTE: Certain figures may not add to totals due to rounding.

Sources: ABS, BTE, Department of Transport and Construction (previously Department of Transport).

Figure 2.3 provides a diagrammatic presentation of the major Australian freight flows between line section nodes in 1979-80. Only flows in excess of one million tonnes are shown, this figure being the addition of the total tonnes of freight carried in each direction along the lines shown. More detailed information on flows along all principal lines is shown in the network diagrams included in Chapter 6.



Note: Certain figures do not add to totals due to rounding

Figure 2.2. Australian railways — estimates of principal commodities as proportions of total freight tonnes consigned, 1979-80

GOVERNMENT RAILWAYS

Route characteristics

The State and Commonwealth-owned networks at 30 June 1980 comprised 39 463 route km of line. New South Wales and Queensland both had approximately 10 000 km of line, WA over 6500 km, and Victoria and SA just under 6000 km. Details of the length of line of each system in each State and Territory are shown in Table 2.3.

Government-owned lines are of three gauges. Narrow gauge lines extend for 16872 route km, standard gauge for 14195 route km and broad gauge for 8396 km.

Further details of route km of line and track km are contained in a publication of the ABS (1982b).

System	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
PTCNSW	9 773	_	_	_	_	_			9 773
VicRail	328	5 856	_	_		_	_	_	6 184
QR	_	-	9 904	_	_	_	_	_	9 904
Westrail	_	_			5 773	_			5 773
Total	10101	5856	9904		5773				31634
AN									
Central	47	_		3847ª	_	—	_		3894
Region Northern	_	_	_	2067	731	_	278	_	3076
Region ^b Tasmanian Region	_	_	_		—	851		_	851
ACT Railway	_				_	_		8	8
Total	47	_		5914	731	851	278	8	7829
All systems	10 148	5856	9904	5914	6504	851	278	8	39 463

TABLE 2.3—GOVERNMENT RAILWAYS; ROUTE KILOMETRES OF LINE OPEN FOR TRAFFIC, 30 JUNE 1980

a. Includes a total of 142 km of railway route in metropolitan Adelaide which is owned and serviced by the State Transport Authority—Rail Division.

b. Excludes the Tarcoola—Alice Springs standard gauge line which at 30 June 1980 was not open but which was available for traffic from Tarcoola SA to Kulgera NT.

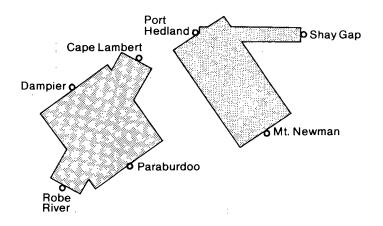
Source: ABS (1982b)

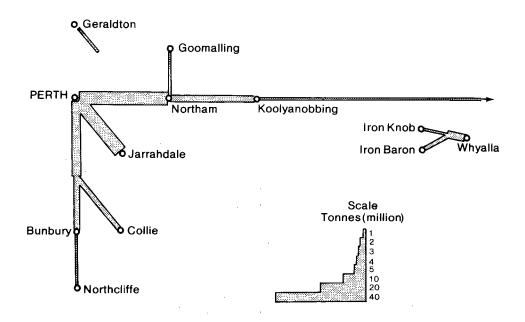
A brief description of government railway systems operating in each State in 1979-80 is presented in the following paragraphs. An outline map which shows the extent of coverage by the government railway systems and the location of intersystem connecting sections and bogie exchanges is shown in Figure 2.4.

New South Wales

Of the total of 10148 route km of railways open for traffic in NSW, 9773 route km were operated by PTCNSW, 328 route km by VicRail and 47 route km by AN. The VicRail system extends into NSW Riverina Region to Balranald, Deniliquin and Oaklands while AN operates from the South Australian border to Broken Hill.

The standard gauge PTCNSW system does not extend outside the State. Intersystem connections are made with VicRail at Albury-Wodonga, Oaklands and Tocumwal, with

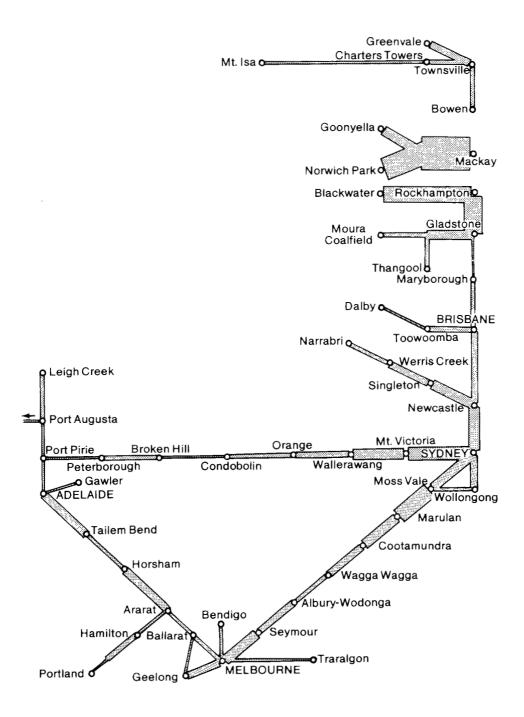


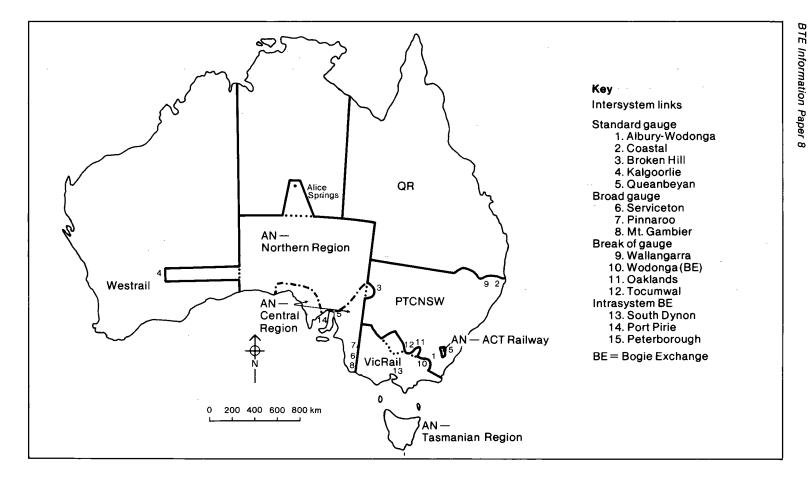


Note: Diagrammatic representation of rail system only

Source: Bureau of Transport Economics

Figure 2.3. Major freight flows on Australian railways, 1979-80







QR at Border Tunnel and Wallangarra, with the South Australian AN network at Broken Hill and with the ACT Railway at Queanbeyan. Breaks of gauge with other systems occur at Oaklands, Tocumwal, Wodonga and Wallangarra.

Victoria

Only VicRail operates the 5856 route km of broad gauge lines that were open in Victoria at 30 June 1980. This figure includes a 325 km length between Melbourne and Wodonga which has both parallel broad and standard gauge lines. The system is centred on Melbourne with other lines linking the interior with the ports of Geelong and Portland. VicRail lines cross into NSW at Echuca (for Balranald and Deniliquin) and at Yarrawonga (for Oaklands).

In addition to the standard gauge connection with the PTCNSW system at Albury, there is a nearby bogie exchange at Wodonga which caters for the break-of-gauge between NSW and north-east Victorian traffic. The South Dynon bogie exchange in Melbourne caters for through traffic to and from Adelaide via the broad gauge lines.

VicRail connects wth the South Australian broad gauge AN network at Serviceton (the principal border crossing point) and also near Mt Gambier and at Pinnaroo.

Queensland

The QR figure of 9904 route km at 30 June 1980 consisted of 9793 route km of narrow gauge lines and a standard gauge line of 111 route km connecting South Brisbane with the New South Wales border. Standard gauge services in Queensland are operated by the PTCNSW which is reimbursed by QR for the costs involved. Wallangarra, which connects the QR narrow gauge system with the NSW standard gauge system, provides the only other intersystem connection. The QR system extends north to Cairns with important links to the west from Townsville to Mt Isa, Rockhampton to Longreach and Brisbane to Quilpie.

South Australia

All South Australian government railways outside of metropolitan Adelaide, totalling 5772 route km at 30 June 1980, are owned and operated by AN. In 1979-80 these lines were administered as two separate systems, the Central Region comprising the lines formerly owned by the South Australian Railways, and the Northern Region which were the former Commonwealth Railways lines (the Trans-Australian Railway and the Central Australia Railway).

Central Region, based on Adelaide, consists of the broad gauge non-metropolitan network covering south-eastern SA and a standard gauge Port Pirie to Broken Hill link (with 47 km of line within NSW). The Adelaide to Crystal Brook (near Port Pirie) standardisation project approved during 1979-80 will allow the through running of wagons on standard gauge bogies between Adelaide and Perth, Sydney and Brisbane, thus avoiding the need for the present bogie exchange facilities at Port Pirie. Central Region also includes a separate narrow gauge system on Eyre Peninsula, extending north and west from Port Lincoln.

Northern Region in South Australia consists of 1051 km of the former Trans-Australian Railway line from Port Pirie to the Western Australian border with a 75 km extension from Port Augusta to Whyalla, and 349 km of the former Central Australia Railway from Stirling North (near Port Augusta) to Marree.

Northern Region also included 591 km of the narrow gauge line between Marree and the Northern Territory border until the line was closed on 31 December 1980. Although not officially opened until 1979-80, the Northern Region now includes the new standard gauge line from Tarcoola to Alice Springs¹.

^{1.} This line was opened on 9 October 1980. During 1979-80 traffic was hauled over it for 577 km from Tarcoola SA to Kulgera NT.

The South Australian lines made broad gauge connections with VicRail at Serviceton, Mt Gambier and Pinnaroo, while compatible gauge connections occur with the standard gauges of the PTCNSW at Broken Hill and Westrail at Kalgoorlie. A minor bogie exchange facility existed at Peterborough, east of Port Pirie, connecting broad gauge traffic with the standard gauge east-west line.

Western Australia

The Westrail system operates a network of narrow gauge lines, although the principal route consists of a standard gauge line from Kalgoorlie to the Perth metropolitan area, with an important spur to Kwinana and Fremantle. Dual-gauge lines exist in the metropolitan area and east to Northam. Other standard gauge lines link Kalgoorlie with Leonora to the north and Esperance to the south. The narrow gauge system extends north and south from Perth and Northam with a major concentration of freight traffic in the Perth—Bunbury—Collie area. Westrail's operations extended over 4396 route km of narrow gauge lines and 1377 route km of standard gauge lines (total 5773 route km).

The total length of line operated by AN Northern Region in WA during 1979-80 was 731 route km.

Tasmania

Freight operations are carried out by AN Tasmanian Region which is administered from Launceston. In 1979-80, 851 route km of narrow gauge lines were operated. The Tasmanian system consists of a main line connecting Hobart with Burnie via Western Junction with an important spur line from Western Junction to Launceston and Bell Bay. Several other branch lines link with this main line.

Northern Territory

During 1979-80, the only rail line open for traffic in the NT was the 278 route km of the old narrow gauge Alice Springs railway.

Australian Capital Territory

The Australian Capital Territory Railway is a short 8 route km section of standard gauge line linking Queanbeyan NSW with Kingston ACT. The PTCNSW carries out all train operations on the line under arrangement of financial reimbursement from AN for the expenses incurred.

Freight consignments by system

The freight consignments made over the individual railway systems in the 11 years to 1979-80 are shown in Table 2.4. The estimates for the State systems were obtained from ABS and it should be noted that they include departmental traffic carried by the PTCNSW, and freight carried by Westrail road services. In 1979-80 the former amounted to 0.1 million tonnes and the latter to 0.3 million tonnes.

By the study definition of freight consignments (Chapter 1) the NSW system recorded the highest tonnes consigned with 37.6 million tonnes in 1979-80. Queensland Railways followed closely behind with 37.1 million tonnes, Westrail with 20.2 million tonnes consigned, VicRail with 11.0 million tonnes, AN's South Australia-based operations with 7.9 million tonnes and Tasmanian operations with 2.1 million tonnes. ACT Railway consigned negligible quantities of freight as its main activity is to bring freight to Canberra.

Figure 2.5 shows the growth of the tonnes consigned to 1979-80.

Consignments of freight on Queensland Railways increased by some 170 per cent in ten years, mainly due to the carriage of extra quantities of export coal. Westrail's, consignments increased by some 95 per cent (with bauxite ore from the Darling Range contributing to this increase in freight). Freight consignments on Tasmanian railways

(million tonnes)															
	State system				Commonwealth Railways ^a			Australian Nationala				All			
Year	NSW°	Vic	Qld	WAd	SA	Tas	TAR ^e	CAR ¹	NAR ^g	ACT Railway	Central I Region	Northern Region	Tas Region	ACT Railway	govern- ment railways ^b
1969-70	31.8	9.7	13.7	10.5	4.8	1.3	0.3	2.2	1.2	_					75.5
1970-71	31.6	10.3	14.7	13.0	4.9	1.2	0.4	1.8	1.1						79.0
1971-72	30.8	9.8	18.4	13.4	4.8	1.3	0.3	1.7	1.0						81.6
1972-73	29.0	9.3	23.1	13.2	4.5	1.6	0.4	1.7	1.0						83.8
1973-74	30.3	9.2	23.7	14.3	5.1	1.8	0.4	1.7	0.8						87.3
1974-75	30.7	8.9	28.1	15.5	5.1	1.7	0.4	2.0	0.3						92.7
1975-76	29.7	8.9	32.0	16.9	4.6	1.6	0.4	1.9							96.0
1976-77	32.0	8.8	33.1	18.2							3.8	2.0	1.6	_	99.5
1977-78	31.5	9.2	32.8	17.8							3.6	2.1	1.6		98.6
1978-79	31.4	9.3	35.4	18.4							4.1	2.1	1.8	<u> </u>	102.5
1979-80	37.7	11.0	37.1	20.5							6.3	2.4	2.1	—	117.1

TABLE 2.4-GOVERNMENT RAILWAYS; ESTIMATES OF FREIGHT CONSIGNED, 1969-70 TO 1979-80

a. Australian National was formed in 1975 to take over the operations of the South Australian Railways (excluding metropolitan passenger services), Tasmanian Government Railways and Commonwealth Railways.

b. Includes departmental traffic carried by the NSW system and road services traffic carried by the WA system.

c. Includes departmental traffic. In 1979-80, this traffic amounted to 0.1 million tonnes.

d. Includes road services traffic. In 1979-80, this traffic amounted to 0.3 million tonnes.

e. TAR Trans-Australian Railway.

f. CAR Central Australia Railway.

g. NAR North Australia Railway.

Sources: ABS and BTE.

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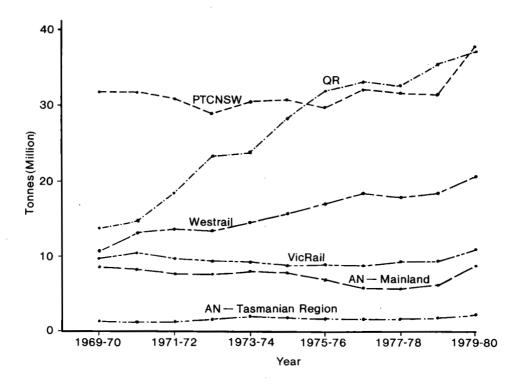


Figure 2.5. Government railways – tonnes of freight consigned by system, 1969-70 to 1979-80

increased by some 60 per cent in the same period. In the period 1975-76 to 1979-80 the major increases in freight consignments on all government lines were associated with woodchip logs, cement, fertilisers and coal.

The other systems, namely NSW, Victoria and the SA-based Australian National, remained relatively static in total freight carried in the decade to 1979-80, although the three systems had markedly improved freight figures in 1979-80 compared with 1978-79. The NSW system accommodated an increase in wheat consignments in 1979-80 by some 2.8 million tonnes and an increase in coal by some 2.2 million tonnes compared with the previous year; VicRail substantially increased its consignments of wheat and AN handled a large carryover of grain from the previous harvest.

Overall, freight consignments over government railways in 1979-80 showed a rise of some 55 per cent compared to 1969-70.

NON-GOVERNMENT RAILWAYS

Route and operator characteristics

The following list of non-government railways classified by State and principal product(s) carried, was current at 30 June 1980 and all were included in this study for 1979-80.

New South Wales

 Coal The Broken Hill Proprietary Company Limited 	
Kemira/Nebo to Port Kembla	11 route km
Wongawilli to Port Kembla	11 route km
South Maitland Railways Pty Ltd Cessnock Coalfields to East Greta Junction	24 route km
Coal & Allied Industries Limited Stockrington to Hexham Washery	9 route km
 Limestone Blue Circle Southern Cement Limited South Marulan to Medway Junction 	7 route km
Victoria	
 Coal SEC of Victoria Yallourn open cuts to Morwell 	11 route km
 Paper Products Australian Paper Manufacturers Limited Morwell factory to VicRail siding 	7 route km
Queensland	
 Raw sugar/sugar cane Various permanent 'tramways' 	3194 route km
 Bauxite Comalco Aluminium Limited Andoom Mine to Lorim Point (Weipa) 	19 route km
South Australia	
 Iron ore The Broken Hill Proprietary Company Limited Iron Knob/Iron Baron to Whyalla 	79 route km

 Limesand The Broken Hill Proprietary Company Limited Proper Bay to Coffin Bay 	41 route km
Western Australia	
 Iron ore The Broken Hill Proprietary Company Limited Mount Newman to Port Hedland 	426 route km
Hamersley Iron Pty Ltd Paraburdoo to Dampier	386 route km
Goldsworthy Mining Limited Goldsworthy/Shay Gap to Finucane Island	180 route km
Cliffs Western Australian Mining Co Pty Ltd Robe River to Cape Lambert	167 route km
Tasmania	
 Minerals and General Freight Emu Bay Railway Company Limited 	

Melba Siding to Burnie

133 route km

Details of non-government railways route km open in every State at 30 June 1980, classified by type of railway, are set out in Table 2.5.

TABLE 2.5—NON-GOVERNMENT RAILWAYS; ROUTE KILOMETRES OF LINE OPEN FOR TRAFFIC, 30 JUNE 1980

State	lron ore railways	Sugar tramways	Other	All non- government railways ^a
New South Wales			62	62
Victoria			18	18
Queensland		3194	19	3213
South Australia	79		41	120
Western Australia	1159	·	_	1159
Tasmania			133	133
Australia	1238	3194	273	4705

a. Includes all lines having a route length exceeding 2 km and operating outside of industrial estates, harbour precincts, mines and quarries.

Source: Department of Transport and Construction (previously Department of Transport).

A notable change has been an increase in the length of permanent sugar tramways¹ from 3015 route km at 30 June 1976 to 3194 route km at 30 June 1980.

Freight consignments

From 1969-70 to 1979-80 the freight tonnes consigned by non-government railways increased by some 92 per cent from 66.1 million tonnes to 127.2 million tonnes. Much of this increase was accounted for by the expanding iron ore traffic in the early 1970s. Iron ore consignments peaked in 1974-75 at 95.7 million tonnes and subsequently stabilised at some 85 million tonnes per year.

Sugar cane and raw sugar carried by tramways, now all in Queensland, increased by more than 30 per cent over the decade from 13.7 million tonnes to 18.3 million tonnes.

This is exclusive of 'temporary' track laid through canefields which is taken up after the cane has been gathered.

Bumper harvests were experienced in 1976-77 and 1977-78 when volume consigned exceeded 20 million tonnes per year.

Other freight, some 86 per cent of which in 1979-80 was made up of NSW and Victorian coal and Queensland bauxite, also increased by over 30 per cent over the decade, from 15.0 million tonnes to 20.6 million tonnes.

Details of the tonnage carried by the various types of non-government railways in the decade to 1979-80 are shown in Table 2.6.

TABLE 2.6—NON-GOVERNMENT	RAILWAYS;	ESTIMATES	OF	FREIGHT
CONSIGNED, 1969-70 TO 1979-80				

Year	lron ore railways	Sugar mill tramways ^a	Other	All non-go railw	
1969-70	37.4	13.7	15.0	66.1	(59.6)
1970-71	49.5	14.8	14.5	78.8	(72.6)
1971-72	54.9	16.2	13.7	84.8	(78.7)
1972-73	67.7	16.1	17.0	100.8	(94.6)
1973-74	84. 9	16.4	20.0	121.3	(115.1)
1974-75	95.7	17.2	21.2	134.0	(127.8)
1975-76	83.8	18.8	17.8	120.5	(116.7)
1976-77	86.6	20.1	20.3	127.0	(123.6)
1977-78	85.9	20.3	17.9	124.0	(121.2)
1978-79	79.5	18.6	19.6	117.7	(114.1)
1979-80	88.3	18.3	20.6	127.2	(123.2)

(million	tonnes)
mmon	(Unites)

a. Figures for sugar are based on calendar years (eg for 1969-70 figures are for the year ended 31 December 1969).

b. Figures in parentheses are estimates of freight carried solely over non-government lines (figures of freight transferred to or from government railway lines are excluded).

NOTE: Certain figures may not add to totals due to rounding.

Sources: BTE for years to 1977-78; Department of Transport and Construction (previously Department of Transport) for 1978-79 and 1979-80.

CHAPTER 3—CONSIGNMENT CHARACTERISTICS OF PRINCIPAL FREIGHT FLOWS ON GOVERNMENT RAIL SYSTEMS

This chapter examines in more detail the characteristics of freight consignments over Australian government railways in 1979-80. It must be noted that only principal flows are considered which means that for Australia as a whole approximately one per cent of consignments by mass have been excluded¹.

COMMODITIES CONSIGNED BY SYSTEM

Aggregate details of all commodities consigned over all government railways have been set out in the previous chapter. This chapter examines the commodities consigned by government railways in more detail, followed by more precise estimates of intrasystem and intersystem consignments.

In 1979-80, the total tonnage of the principal flows consigned was 115.7 million tonnes. This tonnage may be compared to a 116.7² million tonnes for *all* consignments. The PTCNSW was the busiest system in terms of tonnes consigned by principal flows with 37.5 million tonnes, followed by QR with 36.6 million tonnes. Westrail consignments totalled 20.1 million tonnes and the only other system with more than 10 million tonnes was VicRail (10.8 million tonnes). Details of the consignments from each system in 1979-80 according to the BTE standardised commodities are shown in Table 3.1. Table 3.2 further summarises the commodities consigned into three main groupings, 'minerals', 'grains' and 'other freight'.

A brief description follows of the various commodities consigned by the government railway systems in 1979-80.

Bulk liquids (2.9 million tonnes)

This freight category consists mainly of the various types of refined petroleum products. All State government railways were involved in the task of distributing petroleum products to country centres. PTCNSW (1.1 million tonnes) and QR (0.7 million tonnes) recorded the largest tonnages consigned.

Coal (50.2 million tonnes)

There was a significant rise of consignments of this category over 1975-76 (then 39.6 million tonnes) resulting from increases in the quantities of export coal from Queensland and New South Wales. QR consigned 25.6 million tonnes of coal and coke, PTCNSW 20.1 million tonnes, Westrail 1.8 million tonnes and AN Northern Region 1.7 million tonnes.

Other Minerals (21.7 million tonnes)

This category includes smelted products and construction materials. Westrail carried 11.4 million tonnes of other minerals which comprised some 57 per cent of its total consignments. Consignments of that category by Westrail increased by over 2.5 million tonnes since 1975-76 from increased movements of bauxite from the Darling Range. QR consigned more than 4.0 million tonnes of other minerals and PTCNSW 3.4 million

^{1.} For an explanation of principal flows see Chapter 1.

^{2.} This figure excludes 0.1 million tonnes of departmental traffic and 0.3 million tonnes of road services traffic included in the figure of 117.1 million tonnes shown in Table 2.4.

tonnes. AN Central Region consigned 1.9 million tonnes including over 0.7 million tonnes of Broken Hill ores.

Wheat (15.7 million tonnes)

Bumper harvests of wheat were experienced resulting in high tonnages consigned. PTCNSW consigned 6.0 million tonnes, VicRail 3.7 million tonnes, Westrail 3.2 million tonnes, AN Central Region 1.5 million tonnes and QR 1.3 million tonnes. AN's consignments included a large carry-over of wheat from the previous harvest.

Other grains (4.1 million tonnes)

In order of importance, the systems which consigned the greatest tonnages were QR, VicRail and AN Central Region, with 1.8 million tonnes (including 1.2 million tonnes of raw and refined sugar), 0.9 million tonnes and 0.7 million tonnes respectively.

Cement (1.7 million tonnes)

The largest carriers were VicRail with 0.7 million tonnes consigned and PTCNSW with 0.4 million tonnes.

Fertilisers (2.0 million tonnes)

VicRail consigned 0.6 million tonnes of fertilisers and Westrail 0.5 million tonnes.

Steel (3.1 million tonnes)

Almost 72 per cent of all steel consignments were made on the PTCNSW system (amounting to 2.2 million tonnes). VicRail and AN Northern Region each consigned about 0.4 million tonnes of steel.

Other freight (14.3 million tonnes)

The 'other freight' category includes livestock, timber and a variety of other non-bulk freight as well as containerised and freight forwarders' traffic. PTCNSW recorded the largest quantity, 3.5 million tonnes, followed by QR (2.7 million tonnes), VicRail (2.6 million tonnes) and Westrail (2.4 million tonnes).

INTERSYSTEM FREIGHT CONSIGNMENTS

Of the total of 115.7 million tonnes comprising the principal flows consigned over government railways in 1979-80, the greater part (108.2 million tonnes) was consigned intrasystem between stations belonging to the same railway system. Although only 6.5 per cent of the Australian total was consigned intersystem, the proportions of intersystem consignments varied greatly between systems. The AN Northern Region proportion of intersystem to total consignments was 23 per cent, the AN Central Region 18.8 per cent, and VicRail 16.7 per cent. PTCNSW recorded a proportion of 8.6 per cent, while both QR and Westrail recorded a very low 1.3 per cent each¹. Details of the intrasystem consignments from each system, cross-classified by system of destination, are set out in Table 3.4.

FREIGHT CONSIGNMENTS BY STATE

Because some railway systems operate in more than one State, adjustments have to be made to system freight totals to derive State totals. Figures showing the reconciliation between system freight consignments and State consignments are set out in Table 3.5. For the purposes of its freight movement studies, the BTE has used the Canberra Statistical District (which includes the neighbouring NSW city of Queanbeyan) to

AN Tasmanian Region and AN ACT Railway represented the extremes in terms of the proportions of their consignments carried intersystem with the former having no intersystem traffic and all traffic over the latter being intersystem.

				('000	tonnes)					
System of consignment	Bulk liquids	Coal	Other minerals ^c	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight c	Total (all commodities)
PTCNSW	1 116	20 063	3 440	6 012	369	422	297	2 203	3 577	37 499
VicRail	306	765	831	3 703	858	713	611	436	2 598	10 821
QR	715	25 635	4 041	1 307	1 810	153	148	57	2 705	36 571
Westrail	426	1 775	11 425	3 188	367	74	520	d	2 350	20 125
AN										
Central Region	225	_	1 888	1 529	688	54	314	13	1 486	6 197
Northern	1	1 746	39		_	1		370	211	2 368
Region										
Tasmanian	93	169	42	_		299	110	2	1 412	2 127
Region										
ACT	_	_	-		_	—	_	_	1	1
Railway										
Total	2 882	50 153	21 706	15 73 9	4 092	1 716	2 000	3 081	14 340	115 709

TABLE 3.1—GOVERNMENT RAILWAYS: FREIGHT CONSIGNED BY COMMODITY^a AND SYSTEM OF CONSIGNMENT; PRINCIPAL FLOWS ONLY^b, 1979-80

a. Or commodity group.
b. As defined in Chapter 1.
c. Includes construction materials and smelted products.
d. Not available separately but included in 'Other freight'.

	Mir	nerals	Gr	ains	-	ther nodities	All commodities	
System of consignment	('000 tonnes)	(Per cent of total)	('000 tonnes)	(Per cent of total)	('000 tonnes)	(Per cent of total)	('000 tonnes)	(Per cent of total)
PTCNSW	23 503	62.7	6 381	17.0	7 615	20.3	37 499	100.0
VicRail	1 596	14.7	4 561	42.1	4 664	43.1	10 821	100.0
QR	29 676	81.1	3 117	8.5	3 778	10.3	36 571	100.0
Westrail	13 200	65.6	3 555	17.7	3 370	16.7	20 125	100.0
AN						5 a.		
Central	1 888	30.5	2 217	35.8	2 092	33.8	6 197	100.0
Region								
Northern	1 785	75.4			583	24.6	2 368	100.0
Region								
Tasmanian	211	9.9	. —	_	1 916	90.1	2 127	100.0
Region								
ACT	_	· · · ·			1	100.0	1	100.0
Railway								
Total	71 859	62.1	19 831	17.1	24 019	20.8	115 709	100.0

TABLE 3.2-GOVERNMENT RAILWAYS: CONSIGNMENTS OF MINERALS, GRAINS AND OTHER COMMODITIES; PRINCIPAL FLOWS ONLY^a, 1979-80

a. See definition in Chapter 1.

NOTE: Certain figures may not add to totals due to rounding.

TABLE 3.3—GOVERNMENT RAILWAYS: INTRASYSTEM AND INTERSYSTEM FREIGHT CONSIGNMENTS; PRINCIPAL FLOWS ONLY^a, 1979-80

	Consignments									
	Intra	system	Inter	system	Total					
System of consignment	'000 tonnes	Per cent of total	'000 tonnes	Per cent of total	'000 tonnes	Per cent of total				
PTCNSW	34 270	91.4	3 229	8.6	37 499	100.0				
VicRail	9 011	83.3	1 810	16.7	10 821	100.0				
QR	36 104	98.7	467	1.3	36 571	100.0				
Westrail AN	19 861	98.7	264	1.3	20 125	100.0				
Central Region	5 035	81.2	1 162	18.8	6 197	100.0				
Northern Region	1 824	77.0	544	23.0	2 368	100.0				
Tasmanian Region	2 127	100.0			2 127	100.0				
ACT Railway			1	100.0	1	100.0				
Total	108 232	93.5	7 477	6.5	115 709	100.0				

a. See definition in Chapter 1.

TABLE 3.4—GOVERNMENT RAILWAYS: INTERSYSTEM FREIGHT CONSIGNMENTS; PRINCIPAL FLOWS ONLY^a, 1979-80

			('000 to	onnes)					
	System of destination								
						Total inter-			
System of origin	PTCNSW	VicRail	QR	Westrail	Central Northern Region Region		ACT Railway	system consign- ments	
PTCNSW VicRail QR	824 404	1 532 	1 014 224	270 251 9	207 447 9	32 5 1	174 29 0		
Westrail ^b AN	72	78	3	_	51	44	2		
Central Region	165	650	56	142		147	2	1 162	
Northern Region	125	52	52	230	85		0	544	
ACT Railway	1	0	0	0	0	0	_	1	
Total intersystem receivals	1 591	2 356	1 349	902	829	229	207	7 463	

a. See definition in Chapter 1. Estimates by tonnes are compiled from intersystem consignments recorded by each consigning system.

b. Estimated on the basis of information provided by other systems.

represent the ACT, and has accorded Albury-Wodonga, located on the NSW/Vic border, separate status.

Freight consignments from NSW (38.7 million tonnes) exceed those of the PTCNSW (37.5 million tonnes) because of the inclusion of traffic from Broken Hill carried by AN Central Region (mainly lead and zinc concentrates) and freight consigned from VicRail stations located in southern NSW. Correspondingly, the Victorian freight consignments (10.2 million tonnes) are less than those of VicRail because of the exclusion of consignments from VicRail stations in southern NSW and from Wodonga.

Freight consignments from QId (36.6 million tonnes) are identical with those from the QR system, as are those for the AN Tasmanian Region and Tasmania.

South Australian freight consignments (7.8 million tonnes) are less than those of the AN Central Region and AN Northern Region combined (8.6 million tonnes) owing to the exclusion from SA figures of consignments from Broken Hill NSW, Parkeston (AN's Kalgoorlie siding) and other AN stations in WA, Alice Springs NT and Kulgera NT. Freight from WA exceeded the Westrail figure by the freight consigned eastwards from Parkeston and from other AN stations in WA.

In Table 3.5 the NT freight consignments are given as 27 000 tonnes, the tonnage from Alice Springs over the old narrow gauge line. This somewhat underestimates the NT consignments for 1979-80 because consignments from Kulgera NT (just north of the border on the then partially-completed standard gauge Tarcoola—Alice Springs line) were counted in the North West region of SA¹.

ACT-Queanbeyan includes freight consignments on the AN ACT Railway as well as consignments from the PTCNSW station at Queanbeyan. Similarly, Albury-Wodonga includes freight consignments from the PTCNSW station at Albury and the VicRail station at Wodonga.

 Total consignments from all stations on the new line including Kulgera amounted to 12 000 tonnes in 1979-80.

				10001	onnes)						
	State from which consigned										
System	NSW	Vic	Qld	SA	WA	Tas	NT	ACT ^b	Albury- Wodonga	Total consign- ments	
PTCNSW	37 467		_	_	_		_		32	37 499	
VicRail	532	10 100						_	189	10 821	
QR	_	_	36 571							36 571	
Westrail		_			20 125			_		20 125	
AN											
Central Region	750			5 447				_		6 197	
Northern Region		_		2 315	26		27			2 368	
Tasmanian Region	_	_	_	_	_	2 127	_	—	-	2 127	
ACT Railway		—			—	_		1	_	1	
All systems	38 749	10 100	36 571	7 762	20 151	2 127	27	1	221	115 709	

TABLE 3.5—GOVERNMENT RAILWAYS: FREIGHT CONSIGNMENTS BY SYSTEM AND STATE; PRINCIPAL FLOWS ONLY^a, 1979-80 ('000 tonnes)

a. See definition in Chapter 1. b. Includes Queanbeyan (NSW).

	('000 tonnes)										
State of consignment	Bulk liquids	Coal	Other minerals ^c	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	All commodities	
NSW	1 116	20 063	4 150	6 290	553	422	297	2 203	3 655	38 749	
Vic	306	765	831	3 425	660	713	598	433	2 369	10 100	
Qld	715	25 635	4 041	1 307	1 810	153	148	57	2 705	36 571	
SA	226	1 746	1 217	1 529	688	55	314	383	1 604	7 762	
WA	426	1 775	11 425	3 188	367	74	520	ď	2 376	20 151	
Tas	93	169	42	_ _		299	110	2	1 412	2 127	
NT		_			_	_	_	_	27	27	
ACT ^e	_		_		_	_	_		1	1	
Albury-											
Wodonga				-	14		13	3	191	221	
Australia	2 882	50 153	21 706	15 739	4 092	1 716	2 000	3 081	14 340	115 709	

TABLE 3.6—GOVERNMENT RAILWAYS: FREIGHT CONSIGNMENTS BY COMMODITY^a; PRINCIPAL FLOWS ONLY^b, 1979-80

a. Or commodity group.
b. See definition Chapter 1.
c. Includes construction materials and smelted products.
d. Not available separately but included in 'Other freight'.
e. Includes Queanbeyan (NSW).

CHAPTER 4—REGIONAL CHARACTERISTICS OF PRINCIPAL FREIGHT FLOWS ON GOVERNMENT RAIL SYSTEMS

The largest and most significant flows over Australian government railways in 1979-80 were identified in Chapter 3. These usually occur between a single pair of stations. However there are some commodities that do not have either a single large source (for example wheat from country silos) or a single large destination (for example fertiliser despatch to country areas) and are thus difficult to identify. One way of presenting the relative significance of some of these individually smaller flows is to group all stations within defined regions and to examine the freight flows in terms of tonnages consigned from, and received at all stations, in particular regions as a whole. This chapter presents regional freight movement data for 1979-80 consignments and receivals.

The effectiveness of the regional concept depends to a large extent on the size of the regions. If they are too large, a greater proportion of total movements become intraregional movements because both the station of origin and the station of destination fall within the same regional boundaries. If the regions are too small, then a much higher proportion of movements become interregional and it is difficult to interpret the results because a greater number of regional origin-destination pairs describe the interregional movements.

In this study, the BTE used 78 Australian regions which are shown in maps in Appendix II and are identified by a three digit code (in which the leading digit identifies the State)¹. Three of the regions have no government railways, namely, 688 Pilbara, 689 Kimberley (both in WA) and 795 Western (in Tasmania). Caution should be exercised when comparing interregional flows in this study with those in previous BTE freight studies for 1971-72 and 1975-76¹ as many of the regional boundaries have changed irrespective of whether the regions changed name or not.

In 1979-80, there were 25 regions which consigned more than one million tonnes of freight, and 19 regions which received more than that amount. Details of these regions, and of the commodities handled, are set out in Tables 4.1 and 4.2.

Details of the quantities of rail freight consigned from each region to each other region, dissected by commodity, are set out in Table IV.1 of Appendix IV. A corresponding Table IV.2 shows the same commodity detail for the freight received in each region according to region of origin.

^{1.} For definition of regions see Chapter 1.

TABLE 4.1—GOVERNMENT RAILWAYS: FREIGHT CONSIGNMENTS FROM PRINCIPAL REGIONS BY COMMODITY^a; PRINCIPAL FLOWS ONLY^b, 1979-80

·				('000 tonn	ies)						
		Total consignments									
Region	Bulk liquids	Coal	Other minerals ^d	Wheat	Other grains	Cement	Fert- iliser	Steel	Other freight	All commod- ities	Inter- regional con- signments ^c
459 Mackay Qld	67	14 896	15	_	412	_	1	5	253	15 649	143
203 Newcastle NSW	280	12 742	9	<u> </u>	—	—	141	998	125	14 295	1 567
456 Fitzroy Qld	145	10 158	391	108	240	17	—	2	119	11 180	205
680 Perth WA	268	1	5 607		8	74	413	23	1 218	7 612	1 999
681 South West WA	24	1 774	2 458	2	3		54		951	5 266	2 874
200 Sydney NSW	725	1 760	257	1	10		4	162	2 204	5 123	2 506
460 Northern Qld	122	488	3 007	_	473	99	2	13 -	220	4 424	757
684 Midlands WA		_	1 829	2 121	105		· —	_	38	4 093	3 969
205 Wollongong NSW	108	2 530	249	—	_		146	1 030	25	4 088	1 955
220 Southern Tablelands NSW	_	_	2 529	129	10	. —	. —	_	34	2 702	2 698
330 Melbourne Vic	26 9		1	92	52	_	34	290	1 483	2 221	2 157
578 North West SA	1	1 727	_		· —		_ `	_	41	1 769	1 764
450 Brisbane Qld	378	11	15		11	37	137	37	932	1 558	1 496
334 Wimmera Vic	_		_	1 244	286		—	—	7	1 537	1 390
575 Eyre SA	-	—	654	658	188	_	50		2	1 552	_
216 Central Tablelands NSW	_	1 156		7	_	225	—	2	28	1 418	1 413
331 Barwon Vic	34		21		25	713	381	141	103	1 418	1 418
453 Darling Downs Qld	—	· <u> </u>	2	1 072	291	_	—	—	53	1 418	1 370
570 Adelaide SA	142	_		14	6	7	222	12	976	1 379	1 227
211 Northern Slopes NSW	—	45	_	990	161		—	1	169	1 366	1 164
212 North Central Plain NSW	-	<u> </u>	_	1 278	17	_	—		63	1 358	1 193
687 Central WA	13	_	_	1 055	208	18	_	14	17	1 325	129
217 Lachlan NSW		_		1 217	36	_	_	1	42	1 296	·1 095
335 Northern Mallee Vic	_	—	112	1 032	79	. —	1	1	55	1 280	1 278
213 Central Macquarie NSW		357	—	585	42	_	_	_	21	1 005	1 002

a. Or commodity group.b. See definition in Chapter 1.

c. Included in total consignments.

d. Includes construction materials and smelted products.

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TABLE 4.2-GOVERNMENT RAILWAYS: FREIGHT RECEIVALS IN PRINCIPAL REGIONS BY COMMODITY^a; PRINCIPAL FLOWS ONLY^b, 1979-80

('000 tonnes)											
	Total receivals										
Region	Bulk liquids	Coal	Other minerals ^d	Wheat	Other grains	Cement	Fert- iliser	Steel	Other freight	All commod- ities	Inter- regional receivals ^c
203 Newcastle NSW	71	14 345	333	1 743	161	35	1	184	95	16 968	4 240
459 Mackay Qld	80	14 792	15		382	25	59	20	368	15 741	235
680 Perth WA		1 314	8 805	2 227	164	3	5	178	1 040	13 736	7 938
456 Fitzroy Qld	114	10 258	364	109	285		4	40	116	11 290	315
200 Sydney NSW	6	2 698	555	2 451	175	247	5	640	2 901	9 678	7 061
577 North East SA	<u> </u>		7 094	141	45	8	17	1	60	7 371	7 200
330 Melbourne Vic	137	575	721	213	157	497	18	605	1 828	4 751	4 687
460 Northern Qld	25	132	3 303		482	1	16	42	209	4 210	543
205 Wollongong NSW	7	2 742	1 019	_	2	21	_	242	34	4 067	1 934
681 South West WA	32	460	1 226	171	8	20	28	_	1 402	3 347	955
450 Brisbane Qld	_	84	100	1 145	392	20	4	447	1 104	3 296	3 234
331 Barwon Vic	11	23	82	2 302	387	_	_	86	43	2 934	2 934
570 Adelaide SA	45	8	494	525	343	8	22	262	804	2 511	2 359
576 Port Augusta—Whyalla SA	е	1 727	е	_		е	е	70	е	1 899	1 899
575 Eyre SA			654	658	188		50	_	2	1 552	
687 Central WA	20		953	259	13	14	69	_	97	1 425	229
332 South Western Vic	8	48	_	1 142	100	9	47	3	35	1 392	1 339
206 Illawarra NSW	23	46	1 258	25	_	_	1	1	23	1 377	1 377
226 Far West NSW	733		1	_		162	3	6	358	1 269	1 269

a. Or commodity group. b. See definition Chapter 1.

c. Included in total receivals.

d. Includes construction materials and smelted products.

e. Not available separately but included in total.

CHAPTER 5-ORIGIN-DESTINATION CHARACTERISTICS OF PRINCIPAL INTRASYSTEM FREIGHT FLOWS ON GOVERNMENT RAIL SYSTEMS

The previous chapter considered freight consignments according to groupings of stations into regions. This chapter identifies the major intrasystem movements according to line sections of origin and destination¹. As explained previously, a line section as used in this Information Paper is a group of stations which for the purposes of definition of origins and destinations, are collectively replaced by a single node. This node is usually named after the station in the line section which handled the largest freight tonnage. It should be noted that figures of freight movements to and from the line section node are always greater than the movements at the railway station of the same name, since the node is used as a proxy for *all* stations in the line section. The line sections are shown in the maps contained in Appendix III.

There are many thousands of freight movements of standardised commodities from particular line sections but a fairly representative picture of the total movements is obtained if only the larger consignments of over, say, 50 000 tonnes are considered. In all, there were 230 intrasystem consignments of 50 000 tonnes or more of any standardised commodity from line sections in 1979-80 and details of these are shown in Table 5.1 by system. Altogether, these consignments totalled 91.6 million tonnes, or 84.6 per cent of all intrasystem consignments. Sixteen of these consignments were in excess of one million tonnes each, amounting to 57.0 million tonnes or 52.6 per cent of total intrasystem consignments. Some 28 consignments each exceeded 500 000 tonnes for 1979-80, and 121 exceeded 100 000 tonnes each.

Minerals made up all of the consignments that were individually in excess of one million tonnes during 1979-80. Coal accounted for 49.9 million tonnes of the 92.7 million tonnes contributed by all 230 line section consignments in excess of 50 000 tonnes each. Other minerals² made up a further 21.0 million tonnes and wheat another 12.2 million tonnes.

It should be noted that 18 of the 230 movements were carried between stations located on the same line section. The tonnage of these intrasectional consignments was 20.2 million tonnes, or 22.1 per cent of total tonnages represented by all 230 movements.

1. It was not possible to obtain comparable data for intersystem consignments as details of line sections of origin and destination could not be obtained from the source data provided by the railways.

2. Includes construction materials and smelted products.

TABLE 5.1—GOVERNMENT RAILWAYS: MAJOR^a INTRASYSTEM CONSIGNMENTS BY ORIGIN-DESTINATION AND COMMODITY; PRINCIPAL FLOWS ONLY^b, 1979-80

Line sec	ction of	Standardised	Quantity consigned
Origin	Destination	commodity	('000 tonnes)
	Public Transport C	Commission of New South Wale	6
Newcastle	Newcastle	Coal	12 718
Wollongong	Wollongong	Coal	2 133
Sýdney	Sydney	Coal	1 760
Marulan	Moss Vale	Other minerals (limestone)	1 251
Marulan	Wollongong	Other minerals (limestone)	954
Sydney	Sydney	Containers	765
Singleton	Newcastle	Coal	567
Wallerawang	Sydney	Coal	563
Mt Victoria	Sydney	Coal	508
Werris Creek	Newcastle	Wheat	440
Moree	Newcastle	Wheat	420
Wollongong	Newcastle	Coal	370
Newcastle	Sydney	Steel	317
Wallerawang	Newcastle	Coal	301
Narrabri	Newcastle	Coal	295
Wallerawang	Wollongong	Coal	287
Temora	Sydney	Wheat	283
Wollongong	Sydney	Construction materials	247
Sydney	Sydney	Construction materials	245
Parkes	Sydney	Wheat	237
Wollongong	Sydney	Steel	229
Mt Victoria	Newcastle	Coal	209
Cowra	Sydney	Wheat	203
Goulburn	Newcastle	Other minerals (concentrates	
Moss Vale	Picton	Other minerals	178
Mt Victoria	Wollongong	Coal	172
Condobolin	Sydney	Wheat	169
Kandos	Sydney	Cement	167
Gilgandra	Sydney	Wheat	157
Junee	Sydney	Wheat	155
Condobolin	Parkes	Wheat	149 145
Mudgee	Newcastle	Coal Coal	145
Mudgee	Wollongong Newcastle	Wheat	128
Warialda		Steel	120
Sydney	Wollongong Newcastle	Steel	125
Wollongong Griffith	Sydney	Containers	125
Walgett	Narrabri	Wheat	124
	Sydney	Wheat	115
Dubbo Coonamble	Sydney	Wheat	113
Werris Creek	Newcastle	Other grains	109
Broken Hill	Newcastle	Other minerals (concentrates	
Marulan	Picton	Other minerals (limestone)	109
Mungindi	Moree	Wheat	109
Muswellbrook	Newcastle	Wheat	109
Narromine	Sydney	Wheat	103
		Wheat	103
Warialda	Sydney Dubbo	Petroleum	99
Sydney	Dubbo	i eu vieum	55

TABLE 5.1—GOVERNMENT RAILWAYS: MAJOR^a INTRASYSTEM CONSIGNMENTS BY ORIGIN-DESTINATION AND COMMODITY; PRINCIPAL FLOWS ONLY^b, 1979-80 (Cont)

Line sectio	on of		
Origin	Destination	Standardised commodity	Quantity consigned ('000 tonnes)
Gunnedah	Newcastle	Wheat	96
West Wyalong	Temora	Wheat	95
West Wyalong	Sydney	Wheat	93
Boggabilla	Newcastle	Wheat	91
Newcastle	Sydney	Containers	90
Wagga Wagga	Junee	Wheat	88
Forbes	Sydney	Wheat	86
Nyngan	Sydney	Wheat	84
Newcastle	Wollongong	Steel	77
Nowra	Sydney	Other non-bulk freight	74
Young	Sydney	Wheat	73
Barraba	Sydney	Containers	73
Lake Cargelligo	Sydney	Wheat	72
Warialda	Werris Creek	Wheat	66
Moree	Werris Creek	Wheat	64
Griffith	Sydney	Wheat	60
Mungindi	Werris Creek	Wheat	58
Griffith	Temora	Wheat	57
Cootamundra	Sydney	Wheat	55
Wollongong	Newcastle	Chemicals (liquid)	55
0 0	Temora	Wheat	
Lake Cargelligo Harden	Sydney	Wheat	53 51
	Sydney	Wheat	
	Vic	torian Railways	
Traralgon	Melbourne	Coal	545
Geelong	Melbourne	Cement	495
Robinvale	Geelong	Wheat	494
Seymour	Melbourne	Construction materials	435
Horsham	Portland	Wheat	338
Patchewollock	Portland	Wheat	229
Dimboola	Portland	Wheat	209
Pakenham	Melbourne	Construction materials	190
Korong Vale	Geelong	Wheat	158
Oaklands	Geelong	Wheat	143
Orbost	Melbourne	Timber	130
Deniliquin	Echuca	Other grains	123
Swan Hill	Geelong	Wheat	123
Maryborough	Portland	Wheat	121
Wangaratta	Geelong	Wheat	109
Donald	Geelong	Wheat	101
Geelong	Melbourne	Steel	96
Shepparton	Melbourne	Other non-bulk freight	91
Cobram	Geelong	Wheat	90
Serviceton	Portland	Wheat	90
Melbourne	Geelong	Wheat	85
Ballarat	Melbourne	Other non-bulk freight	78
Bendigo	Geelong	Wheat	78
Deniliquin	Geelong	Wheat	78
Melbourne	Wodonga	Petroleum	76
	5		

TABLE 5.1—GOVERNMENT RAILWAYS: MAJOR^a INTRASYSTEM CONSIGNMENTS BY ORIGIN-DESTINATION AND COMMODITY; PRINCIPAL FLOWS ONLY^b, 1979-80 (Cont)

Line sectio	n of		
Origin	Destination	Standardised commodity	Quantity consigned ('000 tonnes)
Mildura	Geelong	Other minerals	73
Echuca	Melbourne	Other non-bulk freight	71
Benalla	Geelong	Wheat	68
Melbourne	Traralgon	Other non-bulk freight	65
Geelong	Melbourne	Other non-bulk freight	64
Maryborough	Geelong	Wheat	64
Shepparton	Geelong	Wheat	62
Yarrawonga	Geelong	Wheat	61
Traralgon	Traralgon	Coal	60
Traralgon	Melbourne	Other non-bulk freight	59
Horsham	Horsham	Wheat	58
Donald	Portland	Wheat	57
Deniliquin	Melbourne	Other non-bulk freight	54
Melbourne	Melbourne	Steel	54
Echuca	Geelong	Wheat	52
Melbourne	Geelong	Other grains	51
Ouyen	Maryborough	Wheat	51
Robinvale	Melbourne	Wheat	51
Oaklands	Geelong	Other grains	50
	Que	ensland Railways	
Norwich Park	Mackay	Coal	10 474
Laleham	Gladstone	Coal	6 178
Goonyella	Mackay	Coal	4 318
Greenvale	Townsville	Other minerals	2 710
Moura Coalfield	Gladstone	Coal	2 184
Thangool	Gladstone	Coal	1 576
Bowen	Townsville	 Other grains (raw sugar) 	473
Collinsville	Mt Isa	Coal	326
Mt Isa	Townsville	Other minerals	294
Charters Towers	Townsville	Other minerals	289
Mt Isa	Townsville	Smelted products	279
Cairns	Cairns	Other grains (raw sugar)	238
Miles	Brisbane	Wheat	226
Mackay	Mackay	Other grains (raw sugar)	224
Gregory Mine	Gladstone	Coal	220
Glenmorgan	Brisbane	Wheat	192
Yeppoon	Rannes	Other minerals (copper ore)	
Mackay Finch Hatton	Mackay	Sugar cane	176
Goondiwindi	Mackay Brisbane	Other grains Wheat	157 153
Dalby	Brisbane	Wheat	132
Brisbane	Toowoomba	Petroleum	112
Gladstone	Gladstone	Other minerals	92
Collinsville	Bowen	Coal	82
Brisbane	Townsville	Bulk loading	78
Wandoan	Brisbane	Wheat	74
Rosewood	Brisbane	Coal	72
Blair Athoi	Gladstone	Coal	70
Townsville	Brisbane	Containers	70
Emerald	Gladstone	Other grains	69

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TABLE 5.1—GOVERNMENT RAILWAYS: MAJOR^a INTRASYSTEM CONSIGNMENTS BY ORIGIN-DESTINATION AND COMMODITY; PRINCIPAL FLOWS ONLY^b, 1979-80 (Cont)

Line sectio	n of		
Origin	Destination	Standardised commodity	Quantity consigned ('000 tonnes)
Millmerran	Brisbane	Wheat	66
Gladstone	Gladstone	Construction materials	65
Brisbane	Cairns	Fertilisers	64
Brisbane	Cairns	Bulk loading	64
Jandowae	Brisbane	Wheat	64
Millmerran	Brisbane	Other grains	59
Townsville	Mt Isa	Cement	58
Townsville	Mt Isa	Petroleum	57
Dalby	Brisbane	Other grains	54
Dirranbandi	Brisbane	Wheat	54
Brisbane	Mackay	Fertilisers	53
Rockhampton	Brisbane	Containers	53
Theodore	Gladstone	Other grains	52
Brisbane	Dalby	Petroleum	51
· · · · · · · · · · · · · · · · · · ·	AN	Central Region	
Broken Hill	Port Pirie	Other minerals (concentrate	s) 709
Kevin	Thevenard	Other minerals (gypsum)	654
Nuriootpa	Adelaide	Other minerals (limestone)	457
Kimba	Port Lincoln	Wheat	169
Thevenard	Thevenard	Wheat	151
Minnipa	Port Lincoln	Wheat	132
Tailem Bend	Adelaide	Wheat	104
Tailem Bend	Adelaide	Other grains	88
Pinnaroo	Adelaide	Wheat	86
Cummins	Port Lincoln	Wheat	81
Gladstone	Port Pirie	Wheat	74
Pinnaroo	Adelaide	Other grains	71
Renmark	Adelaide	Wheat	70
Serviceton	Adelaide	Wheat	70
Cummins	Port Lincoln	Other grains	60
Adelaide	Adelaide Brokon Hill	Livestock	53
Adelaide Karoonda	Broken Hill Adelaide	Petroleum Other grains	50 50
		Northern Region	
Leigh Creek	Port Augusta	Coal	1 727
		Westrail	
Jarrahdale	Perth	Other minerals (bauxite)	4 482
Koolyanobbing	Perth	Other minerals (iron ore)	1 684
Collie	Perth	Coal	1 314
Bunbury	Perth	Other minerals	1 281
Bunbury	Bunbury	Other minerals	1 171
Eneabba	Geraldton	Other minerals	887
Northcliffe	Bunbury	Other non-bulk freight ^c	705
Perth	Bunbury	Other non-bulk freight ^d	614
Bruce Rock	Perth	Wheat	507
Collie	Bunbury	Coal	421

TABLE 5.1—GOVERNMENT RAILWAYS: MAJOR^a INTRASYSTEM CONSIGNMENTS BY ORIGIN-DESTINATION AND COMMODITY; PRINCIPAL FLOWS ONLY^b, 1979-80 (Cont)

Line section of			
Origin	Destination	Standardised commodity	Quantity consigned ('000 tonnes)
Merredin	Perth	Wheat	279
Goomalling	Perth	Wheat	270
Bonnie Rock	Perth	Wheat	238
Koolyanobbing	Perth	Wheat	206
Kambalda	Kalgoorlie	Other minerals (nickel)	204
Narrogin	Perth	Wheat	178
Albany	Albany	Wheat	161
Northcliffe	Perth	Timber	157
Newdegate	Albany	Wheat	154
Wyalkatchem	Perth	Wheat	144
Katanning	Albany	Wheat	130
Mukinbudin	Perth	Wheat	128
Miling	Perth	Wheat	118
Mullewa	Geraidton	Wheat	110
Koolyanobbing	Northam	Other minerals	96
Mingenew	Geraldton	Wheat	93
Northam	Perth	Wheat	91
Katanning	Albany	Other grains	84
Esperance	Esperance	Other minerals	82
Narrogin	Bunbury	Wheat	78
Kambalda	Perth	Other minerals	75
Newdegate	Bunbury	Wheat	73
Mingenew	Geraldton	Other minerals	66
Perth	Kalgoorlie	Petroleum	65
Perth	Geraldton	Other non-bulk freight	62
Moora	Perth	Wheat	60
Leonora	Kalgoorlie	Other minerals	57
Perth	Merredin	Petroleum	54
Esperance	Kalgoorlie	Petroleum	52
Eneabba	Northcliffe	Other minerals	51
Kalgoorlie	Perth	Other minerals	50
	AN	Tasmanian Region	
Smithton	Bell Bay	Timber (woodchip logs)	241
Railton	Devonport	Cement	238
Florentine	New Norfolk	Timber	157
Fingal	Bell Bay	Timber (woodchip logs)	144
Fingal	New Norfolk	Coal	94
Herrick	Bell Bay	Timber (woodchip logs)	93
Mole Creek	Bell Bay	Timber (woodchip logs)	92
Parattah	Bell Bay	Timber (woodchip logs)	82
Conara Junction	Bell Bay	Timber (woodchip logs)	70
Fingal	Railton	Coal	70
Scottsdale	New Norfolk	Timber	61
Burnie	Bell Bay	Timber (woodchip logs)	50

a. Includes all consignments of 50 000 tonnes or more.

b. See definition in Chapter 1.

c. Includes approximately 585 000 tonnes of timber (woodchips)

d. Includes approximately 540 000 tonnes of petroleum and chemicals (liquids),

CHAPTER 6—CHARACTERISTICS OF PRINCIPAL FREIGHT FLOWS CARRIED BY GOVERNMENT RAIL SYSTEMS ALONG PARTICULAR LINES

While origin-destination information can be useful in identifying particular aspects of the rail freight task, there is also a need for details of the quantities of freight moving along certain lengths of line. This chapter briefly sets out how estimated flows along lines can be derived from station origin-destination data and shows visually the most important features of the 1979-80 flows.

The basic rail freight consignment record is not an ideal source of flow information as it does not indicate the route along which the freight actually moved. The railways acknowledge a standard distance between any pair of stations based on the shortest route and the consignor is charged according to this standard distance. In actual practice, some freight is carried along a more circuitous route for operational reasons¹.

The vast majority of freight travels along the shortest route between stations. For a system having a simple network structure, it is easy to identify the lines over which the freight passes. However, for those systems which can provide alternative routes by way of cross-links between major lines, it is necessary to make certain assumptions when deriving flow details from origin and destination consignment records. For example, in NSW it was assumed that all traffic passing between the Southern line (Sydney-Albury) and Western line (Sydney-Parkes) was routed through Sydney and none was carried over the three cross links which joined these lines. Logistic and schedule considerations related to the rolling stock would tend to make this routing pattern most appropriate. The potential to use alternative routes is greatest in Victoria, Western Australia and parts of New South Wales.

The BTE prepared estimates of 1979-80 freight movements along lines from nodal origin-destination freight flow figures². The freight tonnes moving between nodes (line sections) were counted separately for each link over which they passed en route. When all internodal movements were accounted for in this way, the total of tonnes railed in each direction over each link between nodes was obtained by aggregating the components of all the relevant flows. Intranodal movements (that is, between stations on the same section of line attributed to a particular node) were *excluded* from this exercise.

Details of the actual quantities of freight that moved in 1979-80 in each direction between each pair of nodes are shown in Figures 6.1 to 6.6³. It must be recognised that, because of the use of the nodal concept, not all the tonnages shown would necessarily have moved the whole distance between nodes. Some could have originated from or been received at intermediate stations which, as stated previously, are included in line sections covered by the particular nodes. Also, because some minor branch lines have been incorporated wholly within particular nodes, the intermodal route structure is a simplified version of the route structure actually operated by the railways.

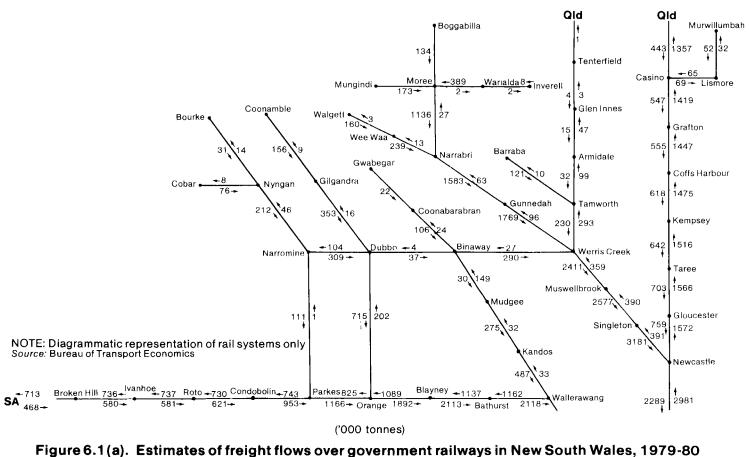
^{1.} These include scheduling arrangements for particular trains, temporary line closures and so on.

^{2.} For details of the method of deriving nodal origin-destination figures, see Appendix I. It should be noted that intersystem movements could be recorded only in terms of movement either to or from a particular railway system.

^{3.} A visual presentation of those lines which carried more than one million tonnes of freight in 1979-80 appears in Figure 2.3.

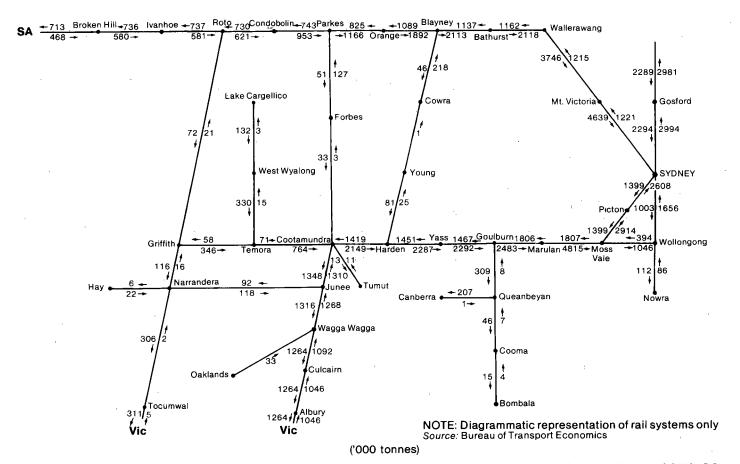
In preparing the flow maps for each system, details of intersystem movements (both inward and outwards) have been recorded in terms of the data provided by the particular system. For this reason, figures of intersystem freight passing from one adjacent system to another may not necessarily be the same on the separate maps of the two systems. Also, in Queensland the origin and destination linkage details for livestock were not available and in the preparation of the flow maps the size of the livestock movements contained in the figures for all commodities shown in Figure 6.3 have been estimated on the basis of receivals being met from the *nearest point of supply*¹. A similar treatment has been made in respect of Tasmanian timber, fertiliser and general freight movements in Figure 6.6.

1. This method results in underestimation, to some extent, of the actual distances that the freight was carried.



(Principal flows only)

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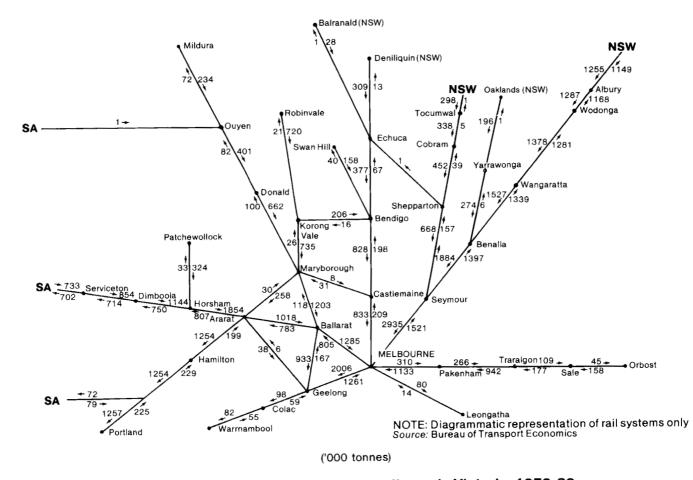
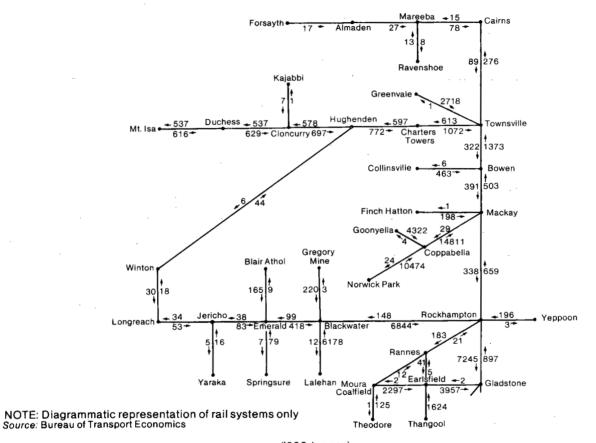


Figure 6.2. Estimates of freight flows over government railways in Victoria, 1979-80 (Principal flows only)



('000 tonnes)

Figure 6.3(a). Estimates of freight flows over government railways in Queensland, 1979-80 (Principal flows only)

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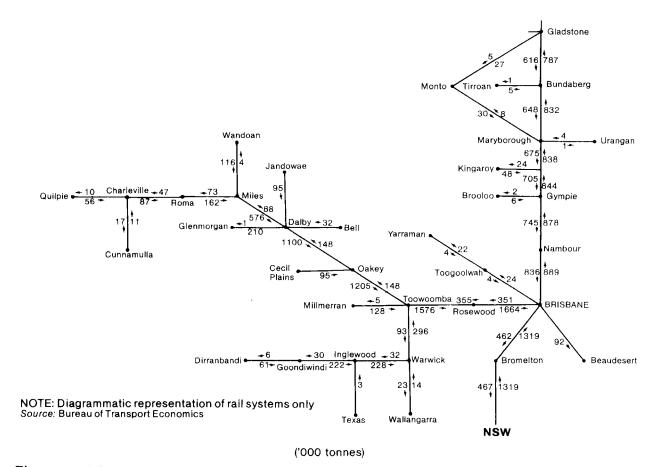
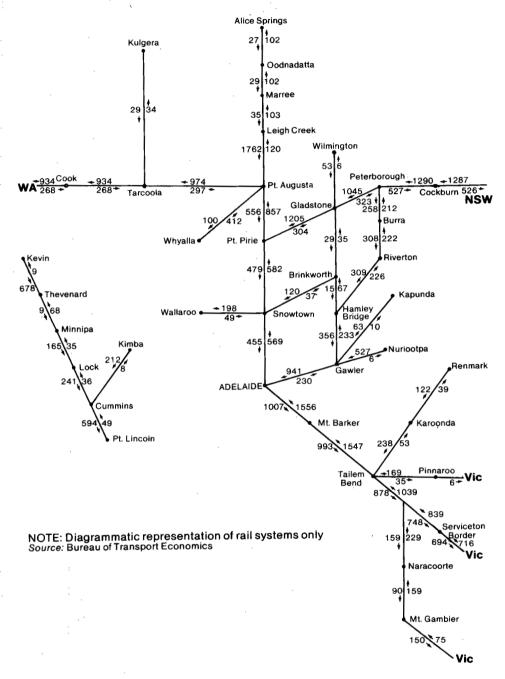


Figure 6.3(b). Estimates of freight flows over government railways in Queensland, 1979-80 (Principal flows only)



('000 tonnes)

Figure 6.4. Estimates of freight flows over government railways in South Australia, 1979-80 (Principal flows only)

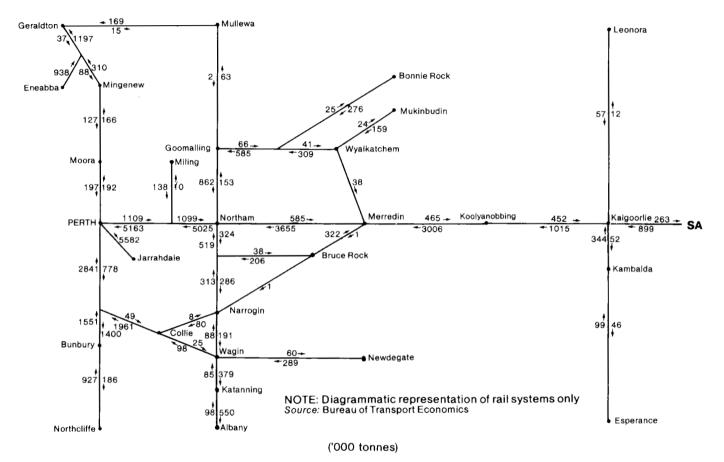
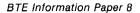
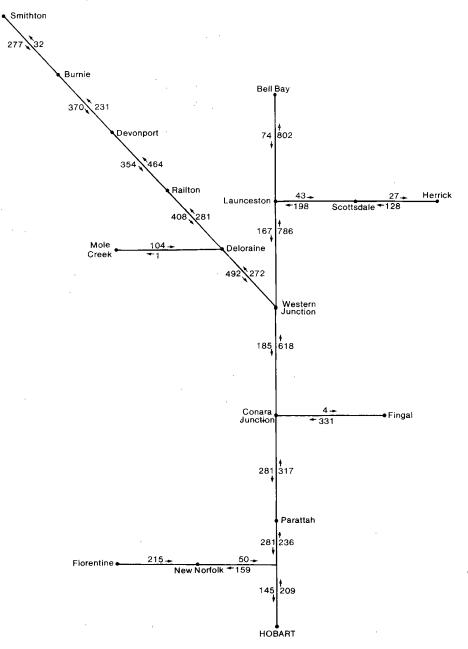


Figure 6.5. Estimates of freight flows over government railways in Western Australia, 1979-80 (Principal flows only)





NOTE: Diagrammatic representation of rail systems only Source: Bureau of Transport Economics

('000 tonnes)

Figure 6.6. Estimates of freight flows over government railways in Tasmania, 1979-80 (Principal flows only)

APPENDIX I—STUDY METHODOLOGY

The purpose of the main part of this study was to assemble and process 1979-80 freight movement data provided by the government railways in order to produce records of the principal flows of a range of standardised commodities according to line section origins and destinations. Ideally, it was desired that a series of compatible data files would be generated relating to the various government railway systems. This series could then be merged to produce a data file suitable for computer processing and appropriate to the government rail network for Australia as a whole. That objective would have necessitated a complete reconciliation of intersystem movements by system of origin and destination. Various shortcomings of the data obtained from the individual rail systems for the year 1979-80 did not permit the ideal objective to be met without the adoption of certain assumptions¹ or gross approximations².

The principal flow results presented in the Information Paper are based entirely on the data provided by each rail system in respect of its own operations. Less reliance was placed on data relating to intersystem linkages although it was used to good effect in some instances where a particular system's data were incomplete³.

TYPES OF MOVEMENTS

The magnetic tapes of freight consignments for a typical rail system contained a series of records which included summarised details of the total quantity of freight consigned in a year⁴ between each particular pair of stations⁵ according to each of the rail system's unique commodity classifications. These records were made up of four types of movements, as follows:

- intrasystem consignments, identified by both originating and destination stations being located on a particular system;
- intersystem consignments, having the originating station on a particular system and the destination station situated on another system;
- intersystem receivals, having the originating station on another system and the destination station on the particular system; and
- intersystem through movements, where both the originating and the destination stations are located on other systems.

These four component types together aggregate for any system the total 'tonnes carried' over that system. The concept of 'tonnes carried', while being meaningful in respect of a single rail system's operations, is not appropriate in measuring Australia-

- 2. Some intersystem movements could not be reconciled between the systems on the available data.
- For example the data supplied by Westrail did not contain information on either the commodity involved or the other rail systems to which or from which freight was consigned. Such details were, however, recorded by AN.
- 4. Some tapes contained a series of records which were summarised for four-week periods.
- 5. Stations on other systems were usually indicated only by the name of the system to which they belonged. However, as previously noted not even this information was supplied universally.

^{1.} For example, with regard to incomplete origin-destination information as outlined in Chapter 6.

wide rail activity as all intersystem consignments are also counted by the receiving system as well as the system where the consignment originated, and by any other system which carried the freight.

It should have been possible to derive all the information for this study by aggregating, for all systems, the first two components listed above, namely, the intrasystem and intersystem consignments. There was no need conceptually to take intersystem receivals or intersystem through movements into account as these details would be covered by the destination details recorded for the intersystem consignments. However, for undefined reasons, details of intersystem movements were not recorded consistently between any two systems with the result that the tonnages which System A recorded as having been sent to System B were not the same as the tonnages System B recorded as having been received from System A¹. Thus, in this study, the BTE avoided the task of attempting any reconciliation of the data and for each particular system used that system's data of intersystem consignments and intersystem receivals. This meant that this study used all records belonging to the first three categories of movements listed above.

COMPUTER PROCESSING

For most systems², data were provided to the BTE in the form of magnetic tapes showing summarised freight consignment records.

The magnetic tape from each system was processed and details of all records for the year which amounted to 50 tonnes or more (of a single commodity) carried between any individual pair of stations³ were transferred to disc storage. At the same time, all records relating to commodities determined as being out of scope for this study were not read⁴.

The resulting records on disc were then further processed by recoding station codes to line section codes, and system commodity codes to the BTE standardised commodity codes. This resulted in many similar records being created but these were aggregated into a series of unique records. To reduce the number of records to be processed to more manageable levels, records relating to freight consignments of less than 500 tonnes were deleted from the file. As noted in Chapter 1, the records deleted from consideration amounted to less than one per cent of total freight consignments in 1979-80.

The resulting data file, which contained only the principal flows, was used for preparing the tabular information presented in Chapters 3, 4, 5 and 6 of this Information Paper.

1. In theory, these figures should agree because all systems count intersystem movements in the time period applicable to the date of the initial consignment note issued for the consignment.

2. PTCNSW, VicRail, QR, AN Central Region and Westrail.

^{3.} Movements to and from other systems had the name of the other system recorded (apart from exceptions previously noted) instead of the relevant station on that system.

^{4.} Commodities described by railway systems as 'departmental traffic' and 'road motor traffic' were excluded from this study.

APPENDIX II—REGIONS

The maps included in this appendix show the regions used to present freight flow information in this Information Paper. The regions defined in this study were, in general, the 50 boundaries which were used by the ABS for the 1976 Census of Population and Housing. In Tasmania, regions correspond to Statistical Subdivisions. This is also the case for NSW regions apart from some exceptions as follows. Regions referred to in this study as Newcastle and Wollongong correspond to the Newcastle Statistical District and the Wollongong Statistical District respectively. The regions described as Hunter and Illawarra correspond respectively to the ABS's Hunter SD less the Newcastle Statistical District. In SA, the Northern SD has been split for this study into two portions called North East and North West regions. Separate regions were defined for Port Augusta-Whyalla, Mt Victoria (in the Outer Sydney SD), for Albury-Wodonga and for Canberra and Queanbeyan.

As mentioned in the Special Note on page v, other estimates of interregional freight movements have been prepared based on NTS regions. These estimates are available in microfiche form on request to the BTE. Details of the NTS Regions are set out by Aplin and Hirsch (1978).

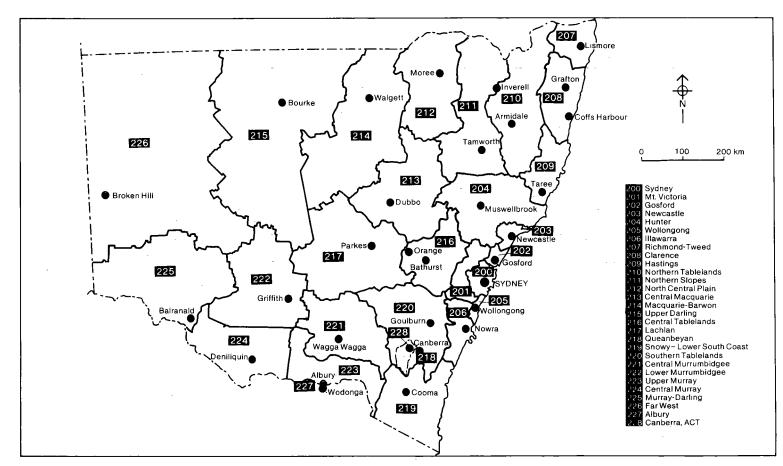


Figure II.1. New South Wales and Australian Capital Territory regions

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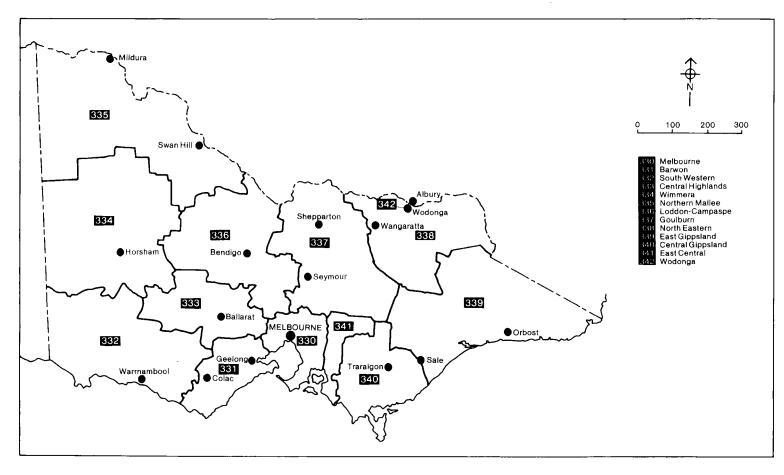
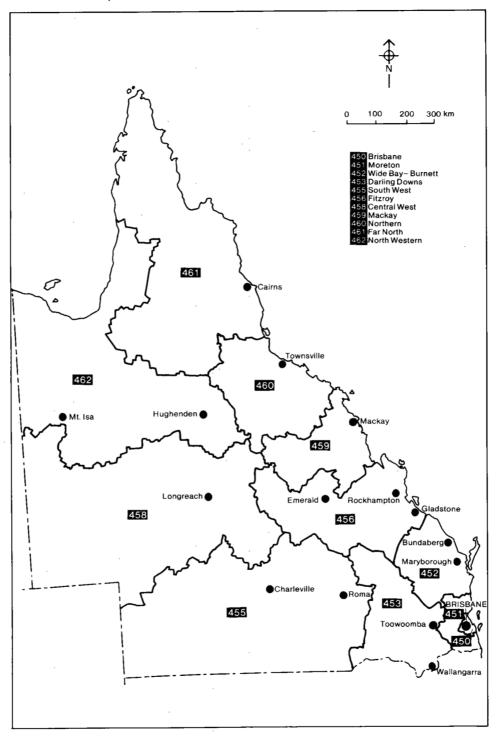


Figure II.2. Victorian regions

Appendix II

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Appendix II

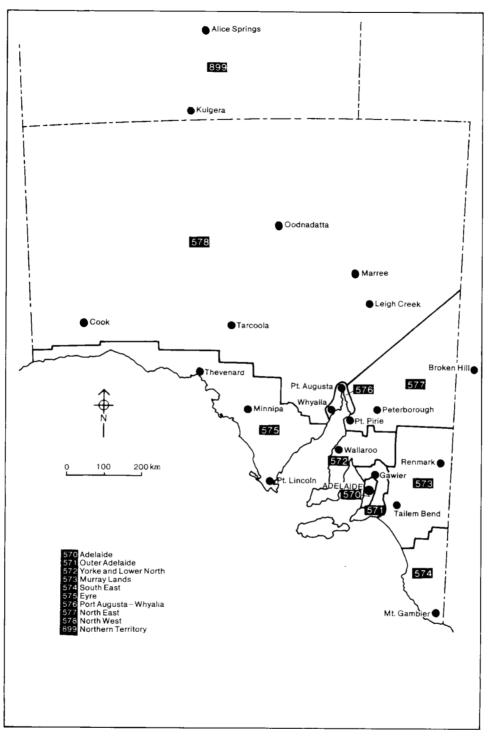
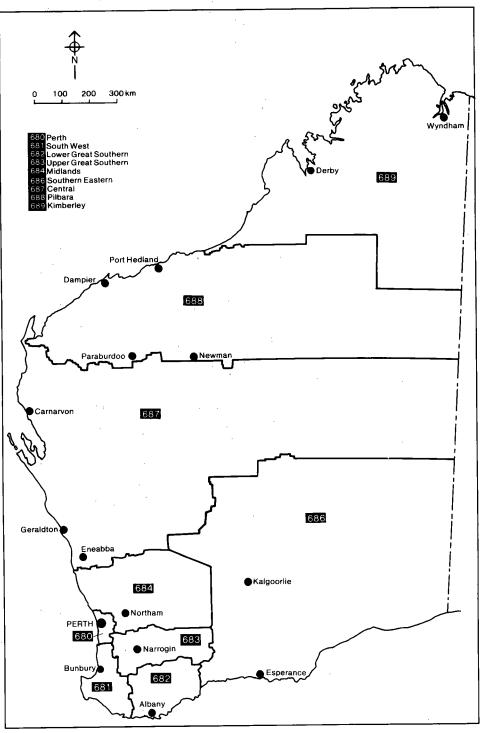


Figure II.4. South Australian and Northern Territory regions





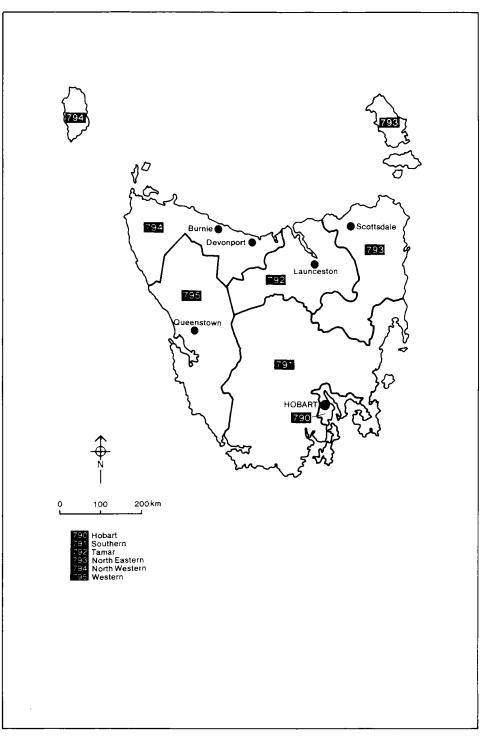


Figure II.6. Tasmanian regions

APPENDIX III—LINE SECTIONS WITHIN REGIONS

The recognition of particular line sections within the railway network is part of a process designed to simplify the presentation of freight flow data. Important sections of line are designated as line sections and all stations on that line section are considered to be situated at a single location, known as a node. Some branch lines are treated as line sections in their own right but others are included as part of main line sections.

In the course of preparation of figures of freight movements between regions, the original source data of movements between pairs of stations were recorded to represent movements between pairs of line sections. This was done by treating all stations in a particular line section as being at a single node which usually took the name of the station handling the most freight. These line sections were determined in such a way that no line section traversed a boundary of a particular region¹.

The maps which are included in this appendix show the line sections in each region of each State as at 30 June 1980.

Data limitations forced the adoption of one exception to this rule. Kulgera NT, on the standard gauge line being constructed from Tarcoola SA to Alice Springs NT, was used for a time during 1979-80 as a freight terminus. It was not possible to obtain freight figures for Kulgera separately from other centres on the line and so the whole line had to be considered to be contained within SA.

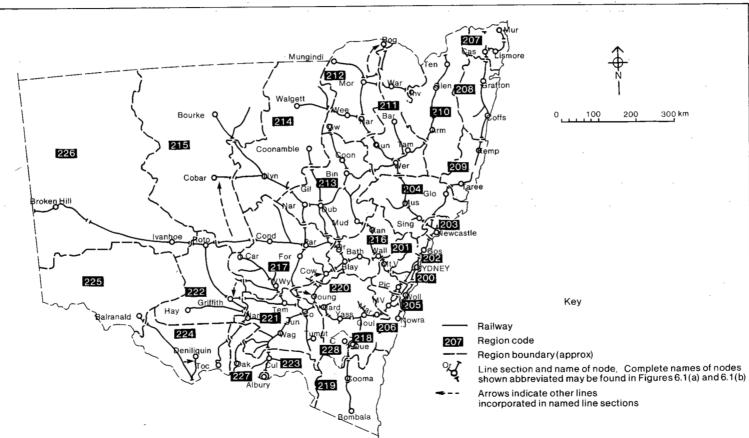


Figure III.1. New South Wales and Australian Capital Territory line sections

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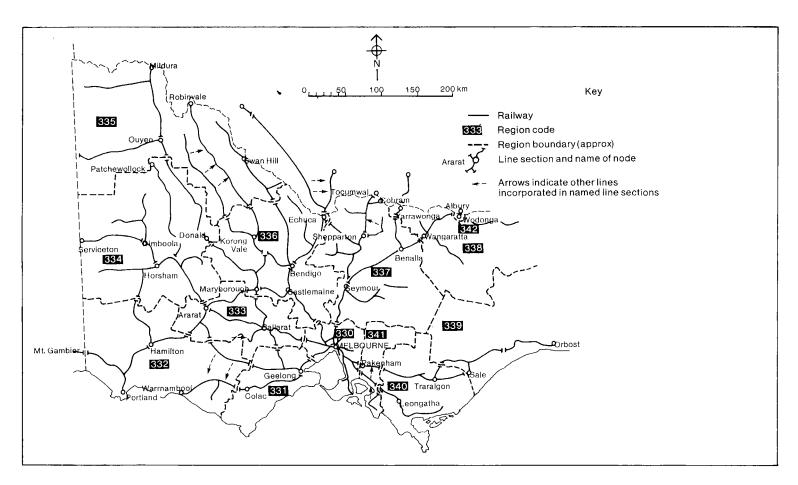
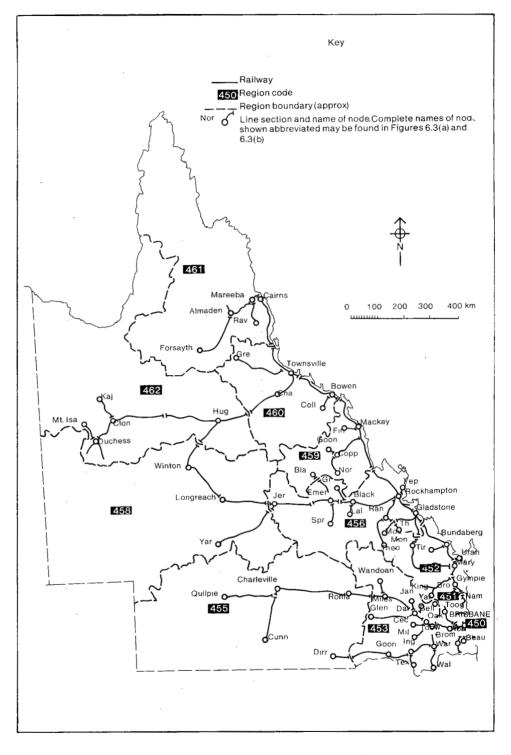


Figure III.2. Victorian line sections





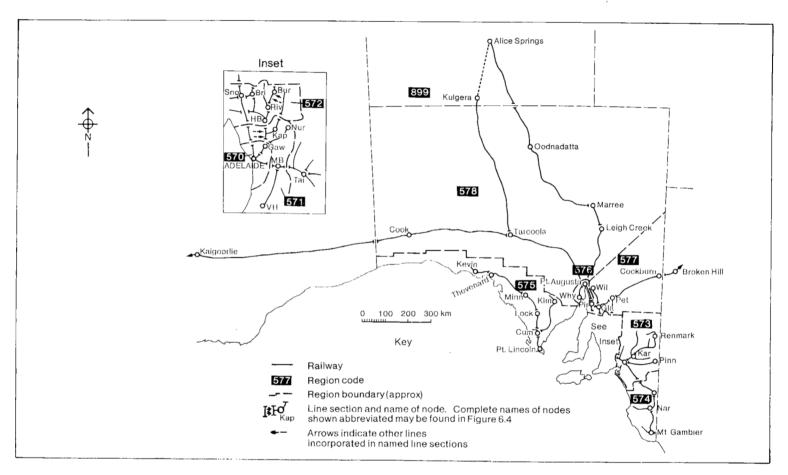


Figure III.4. South Australian and Northern Territory line sections

۰.

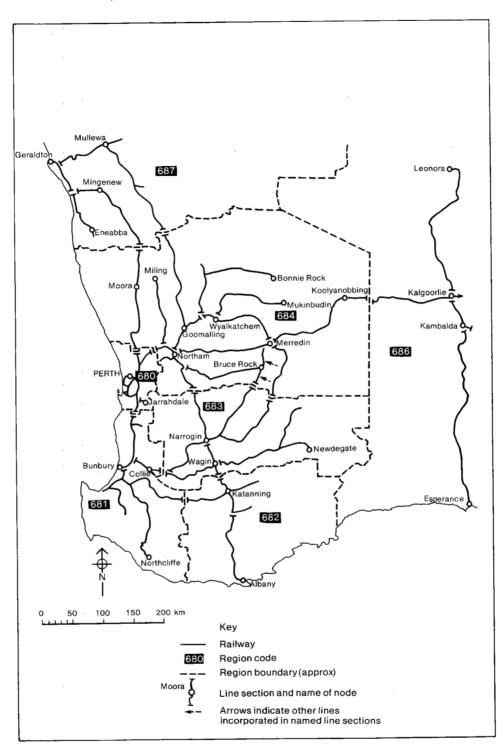


Figure III.5. Western Australian line sections

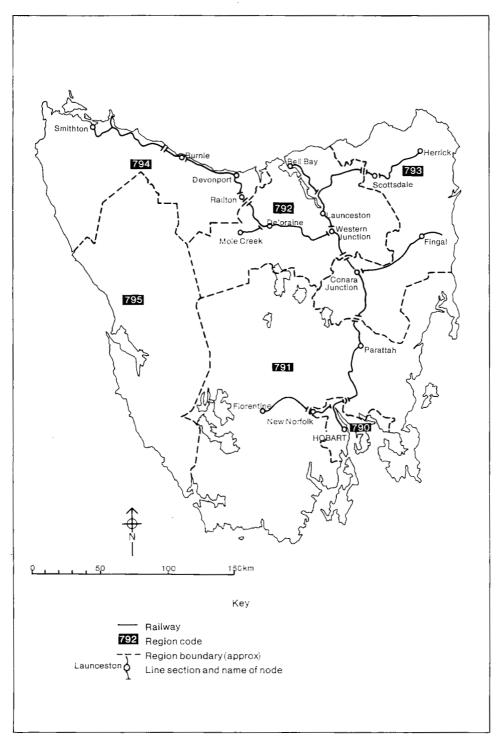


Figure III.6. Tasmanian line sections

APPENDIX IV—REGIONAL ORIGINS AND DESTINATIONS OF FREIGHT CONSIGNED ON GOVERNMENT RAIL SYSTEMS

This appendix contains tables which show details of the 1979-80 freight consignments on government railways by commodity, and where possible, by regional origins and destinations.

Table IV.1 shows details of freight consignments from each of the 78 regions with rail lines, and Table IV.2 shows similar details of freight received in each of these regions. The regions are arranged in numerical order within each table. Maps showing the areal extent of the regions and the principal population centres in each State appear in Appendix II.

The regional information is shown separately for each system involved, and the abbreviated name of the system appears in the regional heading. Two sets of regional data appear for Regions 223 Upper Murray NSW, 224 Central Murray NSW, 226 Far West NSW and 686 South Eastern WA as each of these regions is served by two railway systems. For intrasystem movements, the regional origins and destinations are specified but for intersystem movements the origin or destination on another rail system is indicated only by the name of that system and not by the name of the particular region involved¹.

1. This limitation has been necessary since complete regional information is not available for intersystem freight movements.

			('00	0 tonnes)	·				- <u></u> -	
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTCNS	SW consig	nments fr	om Sydn	ey			(Reg	ion 200)
Intrasystem										
200 [°] Sydney	1	1760	245	1	5	_		15	770	2797
201 Mt Victoria	5	<u> </u>			_	. · . <u>-</u>	<u> </u>		1	6
202 Gosford	_			_	-	-	_	·	2	2
203 Newcastle	13	—			2	_	·	5	44	64
204 Hunter	4	·	_				· -		8	12
205 Wollongong	7	<u> </u>	—	_	2			127	18	154
206 Illawarra	22	—			—	_	—	1	18	41
207 Richmond—Tweed	4		·		1	_	_	-	22	27
208 Clarence	4	—	—		—	_	1	1	10	16
209 Hastings	3	_						_	20	. 23
210 Northern Tablelands	3		—		—	_	—		8	11
211 Northern Slopes	15	—	—	<u> </u>	—	_	—	_	28	43
212 North Central Plain	5	_	_						11	16
213 Central Macquarie	131	—		_	<u> </u>	_		1	22	154
214 Macquarie—Barwon	28	·		_				. —	6	34
215 Upper Darling	18			_		_		_	4	22
216 Central Tablelands	78	—		_	—	_	—	_	20	98
217 Lachlan	82		—	-			_	—	15	97
218 Queanbeyan	29	—	—			_	_	<u> </u>	15	44
219 Snowy—Lower South										
Coast	12		_		_	—	· · · · · · · · · · · · · · · · · · ·		4	16
220 Southern Tablelands	59		_	—	_	—			11	70

70

			('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Tota freigh
221 Central Murrumbidgee	28		_			_	_		23	51
222 Lower Murrumbidgee	3		_				3		22	28
226 Far West (PTCNSŴ)	4		_			—			1	5
227 Albury	_			_			_		1	1
Intersystem										
Victorian Railways	1		5					8	446	460
Queensland Railways	15		6			_		2	419	442
Westrail									200	200
AN Central Region			1			_		1	25	27
AN Northern Region							—	1		1
AN ACT Railway	151								10	161
Total	725	1760	257	1	10		4	162	2204	5123
		PTCNS	SW consign	ments fro	m Mt Vict	oria			(Reg	jion 201)
Intrasystem										
200 Sydney	_	508		1		_	_		11	520
203 Newcastle	—	209					_			209
205 Wollongong	-	172					_			172
221 Central Murrumbidgee				3						3
Total		889	_	4					11	904
		PTCN	NSW consig	inments fr	om Gosfo	ord			(Reg	jion 202)
Intrasystem										
200 Sydney		<u> </u>							13	13
Total		_		_	_	_	_		13	13

			('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTCN	SW consigr	nments fro	m Newca	stle			(Reg	ion 203)
Intrasystem										
200 Sydney	_	_		_	_	_	1	317	99	417
203 Newcastle		12718	_	_	_	_		10	_	12728
204 Hunter	19	-	—		_	_	_	_	2	21
205 Wollongong	-	_	6	_	-		_	77	6	89
206 Illawarra	_		_	—	_	_	1	_	_	1
207 Richmond—Tweed	_	_	_	_	_	_	6	_	1	7
208 Clarence	17	_		_		_	1	—	_	18
209 Hastings	35	-	. — .		_	_	_	_	_	35
210 Northern Tablelands	20	_	<u> </u>	_	_	_	24	_	1	45
211 Northern Slopes	. 89	_	·	<u> </u>	_	_	3	_	1	93
212 North Central Plain	40	—	_	<u> </u>	· _	_	_	_	_	40
213 Central Macquarie	22	_	_		_	_	5	_	_	27
214 Macquarie—Barwon	2		_		_	_	_		_	2
216 Central Tablelands	4	_	_	—	_	_	1	_	_	5
217 Lachlan	<u> </u>	_			_	_	27		_	27
218 Queanbeyan	_	_		_	_	_	1	_	_	1
219 Snowy—Lower South										
Coast	_	1	—	_	_	_	5	_	_	6
220 Southern Tablelands	1	_	_	_		_	4	_		5
221 Central Murrumbidgee	1	18	—	_	_		20		_	39
222 Lower Murrumbidgee	—	_	_		-		3	_	_	3
226 Far West (PTCNSW)			—	—	—	_	_	3		3
Intersystem										
Victorian Railways	21	5	_	—	_	_	3	294	2	325
Queensland Railways	2	_		·	_		23	195	2	222
Westrail	1	—	1	_	_	_	_	15	10	27
AN Central Region	4	—	2	_	_		13	80	_	99
AN Northern Region	2			_		_		7	1	10
Total	280	12742	9	_			141	998	125	14295

72

			('00'	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTC	NSW consig	gnments fr	om Hunt	er			(Reg	ion 204)
Intrasystem										
200 [°] Sydney		10				_	_		115	125
203 Newcastle	_	567	6	109	9	_			3	694
204 Hunter	_				_	_	_		6	6
209 Hastings	_	_			_	_			2	2
Intersystem										
Victorian Railways			<u> </u>	_		_	—	—	1	1
Total		577	6	109	9	—	—		127	828
		PTCNS	W consign	ments from	n Wollong	gong			(Reg	ion 205)
Intrasystem										
200 Sydney	1	16	247			_	3	229	11	507
203 Newcastle	56	370	2	_	_	_	_	125		553
205 Wollongong		2133				_	_			2133
206 Illawarra	1	_	_						_	1
209 Hastings	—	_	<u> </u>	_				3	_	3
210 Northern Tablelands	—	,	_				39		_	39
211 Northern Slopes	_			_	_	_	10	_	_	10
213 Central Macquarie		—	_		_	_	9			9
216 Central Tablelands	—			_	—	_	5	5	—	10
217 Lachlan	—	_	_		—	—	18		—	18
218 Queanbeyan	9	_				—	—	—	—	9
219 Snowy-Lower South Coast	4	_	_	_	_	_	18		_	22
220 Southern Tablelands	15		_	_	_		20	_	_	35
221 Central Murrumbidgee	7						10			17
222 Lower Murrumbidgee	5	_		_	_	_		4		9

TABLE IV.1—RAIL FREIGHT	CONSIGNMENTS FROM	INDIVIDUAL	REGIONS BY	COMMODTIY	GROUP A	AND DESTIN/	ATION
REGION; PRINCIPAL FLOWS	ONLY ^a , 1979—80 (Cont)						l

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			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
									norgin	
Intersystem		_								
Victorian Railways	_	2			_		1	274	6	283
Queensland Railways		1		<u> </u>	_	_	—	306		307
Westrail	_	_	_	_				26	—	26
AN Central Region		. 8			—	_	13	47		68
AN Northern Region			_		_		—	11	8	19
AN ACT Railway	10									10
Total	108	2530	249	_		_	146	1030	25	4088
		PTCN	ISW consig	nments fr	om Illawa	rra			(Reg	ion 206)
Intrasystem										
200 Sydney		_	6		_	44		_	94	144
201 Mt Victoria			178	·	_	30	·	_	—	208
203 Newcastle	_	_	1	_	_	9	_			10
205 Wollongong		6	_	—	_	20	_	_	_	26
207 Richmond—Tweed			_	_		24	_		_	24
208 Clarence	_	_	_	_		11	_	_	_	11
209 Hastings			_			24	_	_		24
211 Northern Slopes	_		_		_	15		_	_	15
213 Central Macquarie	_	_	_			11	_	_		11
227 Albury	_		_	_		9	_	_	_	9
Intersystem										
Victorian Railways		-	12	_	_	-	_	_	9	21
Queensland Railways	_	_	_	_	_	_	_	—	2	2
Westrail								4	1	5
Total	_	6	197	_	_	197		4	106	510

74

			('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Tota freigh
	PT	CNSW c	onsignmen	its from Ri	chmond-	Tweed			(Reg	ion 207)
Intrasystem										
200 Sydney	_	_			_		_		70	70
203 Newcastle	_	_	-		—	_			7	7
208 Clarence		_	_		_	_	_		1	1
209 Hastings	_				_	_	_	_	2	2
222 Lower Murrumbidgee 224 Central Murray	—	—	—	—	_	_	1	_		1
(PTCNSW)					_		1		1	2
Intersystem										
Victorian Railways				—		_	2		24	26
Total	_						4		105	109
		PTCN	SW consig	nments fro	m Clarer	nce			(Reg	ion 208)
Intrasystem										
200 Sydney	_	_	_	_			_		34	34
203 Newcastle					_				3	3
209 Hastings	—	_			_		_		3	3
ntersystem										
Victorian Railways	_	_	—	_		_	_	_	36	36
Queensland Railways						_			1	1
Total	_		_	_			_	_	77	77

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			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTCN	ISW consig	nments fro	om Hastir	ngs			(Reg	ion 209)
Intrasystem										,
200 Sydney	_	_	_	_	_	_	_	_	72	72
203 Newcastle	_	_	_	—	—		_	1	—	1
207 Richmond—Tweed	—	_	_	_	_	_	—	_	1	· 1
224 Central Murray										
(PTCNSW)	—	_	—	—			_	_	1	1
226 Far West (PTCNSW)				—	_	<u> </u>	<u> </u>	—	15	15
Intersystem										
Victorian Railways			_						2	2
Total	_	—	—	-	_	_		1	91	92
	PTC	CNSW co	onsignment	s from No	rthern Ta	blelands			(Reg	ion 210)
Intrasystem										
200 Sydney	_	_	_			_	_		4	4
202 Gosford	_	_	_	_	—	_	_		2	2
203 Newcastle	_	_	6	3	2	_	—		4	15
211 Northern Slopes	_	—	· _	1	1			. —		2
218 Queanbeyan		_		—	—	—			1	. 1
221 Central Murrumbidgee	—	·	—		—	—	—	_	3	3
224 Central Murray										
(PTCNSW)	—	_	—	·	—	—	—	. —	1	1
Intersystem										
Victorian Railways	—	_	_	—	—	_	_	_	10	10
AN Central Region									2	2
Total		_	6	4	3	_	_	_	27	40

76

			('00	00 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Öther freight	Total freight
	P	TCNSW	onsignme	ents from I	Northern	Slopes			(Reg	ion 211)
Intrasystem					· · ·		·			
200 Sydney		—	_	103	13	_			134	250
202 Gosford	_	_	_			_			1	200
203 Newcastle		35	_	684	127	_		1	5	852
204 Hunter	_	_				_	_	_	1	1
206 Illawarra		_		6		_	_			6
209 Hastings				_		_			1	1
211 Northern Slopes		10	_	171	21	_	_	_		202
212 North Central Plain		_	_	13			_	_	_	13
216 Central Tablelands	_		_	1	_	_	_	_		1
217 Lachlan		_	_	11	_				_	11
220 Southern Tablelands				1	_	_			_	1
226 Far West (PTCNSW)			_						3	3
Intersystem									-	•
Victorian Railways	_	_		_	_	_	_		18	18
Queensland Railways	_	_	_	_			_	_	1	1
Westrail			_	_	_	_		_	1	1
AN Central Region			_			_	_		4	4
Total		45		990	161		_	1	169	1366
	PT	CNSW co	nsignmen	its from No	orth Cent	ral Plain			(Reg	ion 212)
Intrasystem										
200 Sydney	_		 -	42	6	_		_	38	86
202 Gosford	_	_	_		_	_	_	_	5	5
203 Newcastle	_		_	854	7	_	_	_	11	872
204 Hunter	_		_	_	_	_	_	_	1	1
208 Clarence	_	_			_	_	_		1	1
209 Hastings		_	_	_	_	_		_	1	1

			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
210 Northern Tablelands	_			_	_				1	1
211 Northern Slopes	_	_		214	4		_	_	_	218
212 North Central Plain	_	_	_	165	_	_	_	_	_	165
217 Lachian		_		3	_		_	_	_	3
222 Lower Murrumbidgee	_		_	_		_		_	1	1
224 Central Murray (PTCNSW)	_		_	_	, 	_	_	_	1	1
Intersystem										
Victorian Railways	—	—	. —	_	—	—	—	—	2	2
AN Central Region		_	—	. —	. —			<u> </u>	1	1
Total	_		_	1278	17	_	_	. —	63	1358
	PI	CNSW d	onsignmer	ts from C	entral Ma	cquarie			(Reg	ion 213)
Intrasystem										
200 Sydney	_	21	_	414	23		_	_	16	474
202 Gosford	_			_		_		—	2	2
203 Newcastle	_	145	_	58	12	—	_		_	215
205 Wollongong	_	144	_	_	_	_	_		2	146
206 Illawarra	_	46		10	_	_	.—	—		56
211 Northern Slopes	_	_	_	43	7	· _	_		1	51
213 Central Macquarie	_	_	_	3	_	_	_	—		3
216 Central Tablelands			_	1	_	_	_	—	—	· 1
217 Lachlan			_	44	_	_		—		44
220 Southern Tablelands	_	1		_	_	_	_	_		1
221 Central Murrumbidgee	_	_	_	5	_	_	—	_	_	5
227 Albury		_		7			—			7
Total	_	357	_	585	42	_	_	_	21	1005

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			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Totai freight
	PT	CNSW c	onsignmen	ts from Ma	cquarie-	-Barwon			(Reg	jion 214)
Intrasystem										
200 Sydney	_		_	198	6				8	212
203 Newcastle		_	_	32	1				1	34
206 Illawarra	_	_		8						8
211 Northern Slopes	—		—	4		_				4
212 North Central Plain				124	<u></u>		<u> </u>		—	124
213 Central Macquarie	—			1				_		1
216 Central Tablelands		—		2		_				2
217 Lachlan	_	_	_	16		_	_	_		16
221 Central Murrumbidgee	—	—		9		—	—	—	_	9
227 Albury				10						10
Total				404	7	·····			9	420
·		PTCNSV	V consignm	ents from	Upper D	arling			(Reg	ion 215)
Intrasystem										
200 Sydney			—	3	1		—	—	10	14
203 Newcastle	_		23			_		_	_	23
205 Wollongong			29						_	29
213 Central Macquarie		—	_	—		-	1		_	1
216 Central Tablelands			19	-		—				19
217 Lachlan			<u> </u>	20				—	—	20
219 Snowy-Lower South										
Coast							1			1
Total			71	23	1	_	2	_	10	107

			('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
	PI	CNSW c	onsignmer	its from Co	entral Tab	olelands			(Reg	ion 216)
Intrasystem										
200 Sydney	_	563	_	7	_	167	_	_	10	747
202 Gosford	_		_		_				3	3
203 Newcastle		301	<u> </u>	_	_	26	_		_	327
205 Wollongong		287	_		_	-1	_	2	_	290
207 Richmond—Tweed	<u>, </u>		_	_	_	2		_	_	2
208 Clarence		—	. —	_		10		_	_	10
209 Hastings		_	_	_	_	1	_	· _	_	.0
211 Northern Slopes	_	_	_	_	_	8	—	_		8
213 Central Macquarie	_	—	_		_	5	_	_	<u>.</u>	. 5
216 Central Tablelands	·	5	·		_	_				5
Intersystem		-								Ū.
Victorian Railways	—		_	_	_	_	. —	·	3	3
Queensland Railways	_	_	_			2	_		5	7
Westrail	 ,		_	_		_	_	_	5	5
AN Central Region		_	_				_	_	2	2
AN ACT Railway	—	_	_	_	_	3	_	_	· _	3
Total	_	1156		7		225		2	28	1418
		PTCN	ISW consig	nments fro	om Lachl	an			(Reg	ion 217)
Intrasystem	-						_			
200 Sydney	_	_	_	860	36	_	_	_	37	933
202 Gosford		_				_	_		2	2
205 Wollongong	_	_	<u> </u>	_	_	_	_	1		1
206 Illawarra		_	_	1		_	_		_	1
212 North Central Plain	_	_	·	· i	_		_		_	. i
216 Central Tablelands	_	_	_	4		_		_	_	4
217 Lachlan	_	_	_	201	_	_	—		_	201

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			('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
220 Southern Tablelands	_	_	_	_	_	_			1	1
221 Central Murrumbidgee		_	_	149		_		_	_	149
227 Albury	_			1	_	_	_			1
Intersystem										
Westrail		—			—	—	_	_	1	1
AN Central Region			<u> </u>				—		1_	1
Total			<u> </u>	1217	36			1	42	1296
	PTCNS	W consig	gnments fro	om Snowy	-Lower	South Co	ast		(Reg	ion 219)
Intrasystem 200 Sydney 220 Southern Tablelands				_		_			5 2	5
Total	_		-	_		_	—	-	7	7
	PTC	CNSW co	nsignment	s from So	uthern Ta	blelands			(Reg	ion 220)
Intrasystem										
200 Sydney			_	125	10				21	156
201 Mt Victoria	_	_	109	_					_	109
202 Gosford	_	_	_		_	_			4	4
203 Newcastle	_		186	_	_		_		_	186
205 Wollongong			977		_	_	_	_		977
206 Illawarra	—	_	1251						4	1255
211 Northern Slopes	_	-	—	1	_	_				1
216 Central Tablelands	_			1		_				1

BTE

			(`00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
217 Lachlan	_	_	_	1		_		_		1
220 Southern Tablelands		_	-		_	_	_		4	4
221 Central Murrumbidgee Intersystem		_	_	1			 .	· — · ·		1
Victorian Railways		—	—		_	_		_	1	- 1
Queensland Railways	_	<u> </u>	6				_			6
Total			2529	129	10		_	- -	34	2702
· ·	PTC	NSW con	signments	from Cer	tral Murr	umbidgee)		(Reg	ion 221)
Intrasystem										
200 Sydney	2	.—	—	570	22		—		24	618
205 Wollongong	_		—	_		_		1	—	1
206 Illawarra	_	_	_	—	—		_	_	1	1
210 Northern Tablelands 219 Snowy—Lower South	_	_	_	_	_	_		_	1	1
Coast	—	_	—	_	_		—		1	1
220 Southern Tablelands	—	<u> </u>	—	—	_	—	—	_	3	3
221 Central Murrumbidgee		—	—	165	1	—	—	_	_	166
227 Albury ntersystem	_		_	4	_	_	—	—		4
Victorian Railways		1	—	178	_	_	_	—	_	179
Queensland Railways	_	_		_	_		—	<u> </u>	9	9
Westrail		_	—			_			2	2
Total	2	1		917	23	_	_	1	41	985

			('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
_	PTC	NSW co	nsignment	s from Lov	ver Murru	ımbidgee			(Reg	ion 222)
Intrasystem										
200 Sydney				107	30		_	_	178	315
203 Newcastle				3	1		_		2	6
205 Wollongong				_				1		1
207 Richmond—Tweed		·						_	1	1
209 Hastings		_	—	_	1		_		_	1
221 Central Murrumbidgee		Landson a		65			_		_	65
Intersystem										
Victorian Railways	R	_		88	10					98
Queensland Railways					_		_		17	17
Westrail	_			_	2			_	1	3
AN Central Region					·			<u> </u>	3	3
Total		_		263	44		<u> </u>	1	202	510
		PTCNSW	consignm	ents from	Upper M	urray			(Reg	ion 223)
Intrasystem			_							
200 [°] Sydney		_		20	4		_		1	25
205 Wollongong	_						_	_	1	1
209 Hastings	_		_	_			_		1	1
210 Northern Tablelands					_				1	1
212 North Central Plain			_	1	_					1
221 Central Murrumbidgee	_	_		25			_	_		25
223 Upper Murray										
(PTCNSW)		—	7	—	—		—	2	—	9
Intersystem Victorian Railways	_	_	_	25			_	_	_	25
Total			7	71	4			2	4	88

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		, i	('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Totai freight
		VicRail	consignme	ents from l	Jpper Mu	rray			(Reg	ion 223)
Intrasystem 330 Melbourne 331 Barwon				1 143	2 50					3 193
Total	_	-	_	144	52	_	_	_		196
		PTCNSW	/ consignm	ents from	Central N	lurray			(Reg	ion 224)
Intrasystem 203 Newcastle 210 Northern Tablelands	1 		-		_		_	_	- <u>-</u> 1	1 1
Intersystem Victorian Railways		_	_	10				—	_	10
Total	1	_		10			_	_	1_	12
		VicRail	consignme	nts from C	entral Mu	urray			(Reg	ion 224)
Intrasystem 330 Melbourne 331 Barwon 333 Central Highlands 336 Loddon—Campaspe 341 East Central Intersystem PTC of New South Wales via Albury				14 78 4 7 5	5 				58 14 — — 1	72 97 4 130 5
Total	_	_		108	128	_			73	309

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			('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Totai freight
		VicRail o	onsignmen	its from M	urray—D	arling			(Reg	ion 225)
Intrasystem										
330 Melbourne	_			6			_			6
331 Barwon			_	13	2	_	_		_	15
333 Central Highlands	_		_	3	_		—		<u> </u>	3
336 Loddon—Campaspe	_			4						4
Total	—	_	_	26	2	_	_	_	_	28
		PTCN	SW consig	nments fro	om Far W	est			(Reg	ion 226)
Intrasystem										
200 [°] Sydney	_	_	_		_				3	3
203 Newcastle		—	109	—	_	_	—		—	109
Intersystem										
AN Northern Region								_	2	2
Total			109	_		_	_		5	114
_	A	N Centra	Region co	nsignmen	ts from F	ar West			(Reg	ion 226)
Intrasystem										
570 Adelaide		_	1	_	4	_		1	31	37
572 Yorke and Lower North					_		—		2	2
577 North East			709				·····		2	711
Total	_	_	710		4		_	1	35	750

			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTC	NSW consi	gnments f	rom Albu	ry			(Reg	ion 227)
Intersystem Victorian Railways					2	_	_		30	32
Total	· <u> </u>	_	_	_	2	_	_	_	30	32
	A	N ACT I	Railway co	nsignment	s from Ca	anberra			(Reg	jion 228)
Intersystem PTC of New South Wales									1	. 1
Total	_	·			_		_	_	1	1
		VicRa	il consignr	nents from	n Melbour	me			(Reg	ion 330)
Intrasystem										
330 Melbourne	_	-	—	6	_	_	_	54	4	64
331 Barwon	9	· _	—	85	51	—	—	12	6	163
332 South Western	3	-	_	1		_	_	3	22	29
333 Central Highlands	14	_		_	1	_	_	10	27	52
334 Wimmera	8	_	_	_	_	—	8	1	12	29
335 Northern Mallee	60	_	_		_	_	13	_	20	93
336 Loddon—Campaspe 337 Goulburn	41			_	_	_	4	4	36 28	85
337 Gouldurn 338 North Eastern	20 7	_	—	_		_	4	2	28 7	54 16
339 East Gippsland	6	_			_	_	2	8	29	43
340 Central Gippsland	7	_	_			_	_	31	29 79	117
341 East Central		_	_		_		_	2	4	•6
342 Wodonga	76	_		_	_	_	1	2	19	98
224 Central Murray (VicRail)				_			1		3	4
225 Murray—Darling (VicRail)	_	_		_		_	—	_	1	1

86

			('00	0 tonnes)				·		
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
Intersystem										
PTC of New South Wales										
via Albury	16		1		_			54	580	651
via Tocumwal	1			—	_		_		4	5
Queensland Railways			_		_			5	168	173
Westrail	1			_	<u> </u>		_	7	214	222
AN Central Region	_				_		1	9 5	212	308
AN Northern Region	_		_	_	_		_	<u> </u>	5	5
AN ACT Railway									3	3
Total	269		1	92	52		34	290	1483	2221
		VicRa	ail consigr	ments fro	m Barwo	n			(Reg	ion 331)
Intrasystem										
330 Melbourne	_			_	8	495	13	96	86	698
332 South Western	4		_	_	_	7	10	_	_	21
333 Central Highlands	8		_	_	17	2	5	_	1	33
334 Wimmera	7		—	_	_	6	9			22
335 Northern Mallee	13		—	—	_	6	15	—	—	34
336 Loddon—Campaspe	—		—		_	27	49	—		76
337 Goulburn	—		_			24	96	—	_	120
338 North Eastern	_			—		8	21			29
339 East Gippsland			—		_	12	43			55
340 Central Gippsland			18	—		1	67	—	_	86
341 East Central	_		—		—	1	6			7
342 Wodonga						48	37	—	—	85
223 Upper Murray (VicRail)					—		1	_	_	1
224 Central Murray (VicRail)							5	—	_	5
Intersystem										
PTC of New South Wales						~ ~			_	
via Albury			1	—	_	39		8	7	55

Appendix IV

TABLE IV.1-RAIL FREIGHT CONSIGNMENTS FROM	1 INDIVIDUAL	REGIONS BY	COMMODTIY	GROUP	AND DESTINATI	ON
REGION; PRINCIPAL FLOWS ONLY ^a , 1979-80 (Cont)						
	('000 toppo)		-			

				0 tonnes)	·					
Destination	Bulk liquids	r Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
Queensland Railways			_	_					1	1
Westrail	<u> </u>	<u> </u>	<u> </u>	—	`		—	3	3	6
AN Central Region	2		2	_	_	11	4	34	5	58
AN ACT Railway						26			<u> </u>	26
Total	34		21		25	713	381	141	103	1418
		VicRail co	nsignme	nts from S	South Wes	stern			(Reg	ion 332)
Intrasystem	-			-						
330 Melbourne	· —		1	· 3	1	· . ·	_	_	59	64
331 Barwon	2	—		13	5	. –	<u> </u>		5	25
332 South Western	_	_	—	5	10		37	—	1	53
333 Central Highlands	-				_		11		_	11
334 Wimmera	1	_	—	1	-		64	—	—	66
335 Northern Mallee		—	_	_	_	—	3		—	3
336 Loddon—Campaspe		—			_	-		—	1	1
337 Goulburn		—		_	_		6		—	6
338 North Eastern	—	—	-	-	—		1	—	_	1
339 East Gippsland		-	_	—	_		. 1		. —	1
341 East Central	_		_	1	—	-	1	_		2
Intersystem										
PTC of New South Wales									,	
via Albury	_	_	_	_		_		—	1	1
AN Central Region			11				58			69
Total	3	—	12	23	16	_	182		67	303

88

			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
	١	/icRail co	nsignment	s from Ce	ntral Hig	nlands			(Reg	ion 333)
Intrasystem										
330 Melbourne	-	20	26	4	3	_		1	81	135
331 Barwon	_	_	1	25	12			—	3	41
332 South Western	_			20	6		_		1	27
333 Central Highlands	_	_	1	8		_			1	10
334 Wimmera		_		—	-	_	_		4	4
335 Northern Mallee		—	1	—	_	_			1	2
336 Loddon—Campaspe		—		_	_	·			1	1
341 East Central	—	—	_	3	—				—	3
Intersystem PTC of New South Wales										
via Albury	_	_	7	_	_	_	—		1	8
AN Central Region									55	5
Total		20	36	60	21			1	98	236
		VicRa	il consign	ments fror	n Wimme	ra			(Reg	ion 334)
Intrasystem										
330 Melbourne		_		38	58		—		1	97
331 Barwon	<u> </u>			104	44	_			2	150
332 South Western				923	73	_	—			996
333 Central Highlands	_	_		14	68		_			82
334 Wimmera		_	_	110	37	_				147
336 Loddon—Campaspe		-		47	5	_	—			52
341 East Central	—	—	—	8	_		~		-	8

			('00	0 tonnes)						
			Other) .	- <u></u>					
· · ·	Bulk	. 1	ninerals		Other	,			Other	Tota/
Destination	liquids	Coal	etc	Wheat	grains	Cement	Fertilisers	Steel	freight	freight
Intersystem										
PTC of New South Wales										
via Albury		. —	—	_	1		_		1	2
AN Central Region	—	. —	_		_	-	-	_	3	3
Total				1244	286		_		7	1537
		VicRail co	nsignmer	ts from N	orthern N	lallee			(Reg	ion 335)
Intrasystem 330 Melbourne			16	105	40	-			50	045
331 Barwon	_	<u> </u>	80	674	40 24		1		53	215
332 South Western	_		00	69	24			. 1	. 1	780
333 Central Highlands			1	38	2 1		_		—	71
335 Northern Mallee				1	1	-	_			40
336 Loddon—Campaspe		_	· _	145	· 11		_		1	2 157
340 Central Gippsland	_		13	145		_	_		1	13/
Intersystem			10	_	_	-	_		—	13
PTC of New South Wales										
via Albury	—	_	2	_	—		_		_	2
Total	_	_	112	1032	79		1	1	55	1280
	Vi	cRail cons	ignments	from Lod	don-Car	npaspe			(Reg	ion 336)
Intrasystem									<u> </u>	
330 Melbourne	_	_		19	37				85	141
331 Barwon			· _	369	71	_	_		4	444
332 South Western	_	_	_	122	6	_	_			128
333 Central Highlands	_		_	6	_	_	_			6
334 Wimmera	_		_	_	_		_		1	1

			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
336 Loddon—Campaspe		_		39	3					42
339 East Gippsland	_	_			_	_	_	_	1	1
340 Central Gippsland	_	_	_	_	_	_	_	_	1	1
341 East Central		—		8	—		—			8
Intersystem										
PTC of New South Wales										
via Albury		_	_		_		_	—	10	10
Queensland Railways		<u> </u>			_	—		—	1	1
AN Central Region		_	_	_	_		_	_	4	4
Total		d		563	117				107	787
		VicRa	il consigni	nents fror	n Goulbu	rn			(Reg	ion 337)
Intrasystem										
330 Melbourne	_		435	8	7	_		—	99	549
331 Barwon		_	_	220	32	_		_		252
332 South Western	_		_	1	1		_			2
337 Goulburn	_			_	_	_	_		1	1
341 East Central	_	_	_	3	_	_			. <u></u>	3
224 Central Murray (VicRail)			1		_			_	_	1
Intersystem										
PTC of New South Wales										
via Albury		—	—	—	—				20	20
Queensland Railways	—	—						_	13	13
Westrail		—	_			—			8	8
AN Central Region			—	—					3	3
Total	—	_	436	232	40		_		144	852

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TABLE IV.1-RAIL FREIGHT CONSIGNMENTS FROM	INDIVIDUAL	REGIONS	ΒY	COMMODTIY	GROUP	AND	DESTINATION
REGION; PRINCIPAL FLOWS ONLY ^a , 1979–80 (Cont)							

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			('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		VicRail	consignme	ents from I	North Eas	stern			(Reg	ion 338)
Intrasystem 330 Melbourne 331 Barwon 337 Goulburn				1 170 —	1 26 —		···· ·	· · · ·	28 1	30 196 1
Total		 .		171	27	_			29	227
		VicRail	consignme	nts from E	ast Gipps	sland			(Reg	ion 339)
Intrasystem 330 Melbourne 331 Barwon 332 South Western 333 Central Highlands 335 Northern Mallee 339 East Gippsland 340 Central Gippsland 341 East Central		 	1 — 1 — 18 —	 1	- 1 - - - -			 	147 1 4 1 	148 4 1 1 4 1 18 18
Total			20	3	1	_			154	178

			('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Stee/	Other freight	Total freight
	١	/icRail co	onsignment	s from Ce	ntral Gip	osland			(Reg	ion 340)
Intrasystem		_								
330 Melbourne	-	545		1		_	_	—	72	618
331 Barwon	-	20	_	3	_	_	—		1	24
332 South Western		48	_		_	_		_		48
333 Central Highlands		12			_		_	—		12
334 Wimmera		3					_		_	3
335 Northern Mallee	_	1	_			_		_		1
336 LoddonCampaspe	_	6		_		—		_	_	6
337 Goulburn		23	_		_	_	_			23
338 North Eastern		14		_					_	14
339 East Gippsland		9		_		_	<u> </u>	_	_	9
340 Central Gippsland		60				—	_		1	61
341 East Central		_	_	1		_	—	_		1
342 Wodonga		1		_	_	_	_	_	_	1
Intersystem										
PTC of New South Wales										
via Albury		1	—						20	21
Queensland Railways		—	—		—		—		11	11
Westrail				_	—	—		—	2	2
AN Central Region		2							10	12
Total		745		5	_	_	_		117	867

TABLE IV.1-RAIL FREIGHT	CONSIGNMENTS FROM	INDIVIDUAL	REGIONS E	BY COMMODTIY	GROUP AND	DESTINATION
REGION; PRINCIPAL FLOWS	ONLY ^a , 1979–80 (Cont)					

BTE Information Paper 8

			('00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		VicRai	l consignm	ents from	East Cen	tral			(Reg	ion 341)
Intrasystem										
330 Melbourne	—	—	191	_	_	—	-	-	—	191
Intersystem										
PTC of New South Wales via Albury	_	_	2		_	_	_			2
Via Albury			<u> </u>							
Total	_	<u> </u>	193		_	_		—	_	193
		VicR	ail consigni	nents fron	n Wodong	ga			(Reg	ion 342)
Intrasystem										
330 Melbourne	_	_	_	_	_	_	_	3	48	51
331 Barwon	_	_	_	—	12		—		1	13
332 South Western	_	-	_	_	_	_	—	—	4	4
337 Goulburn	_	_	_		_	—	_	_	1	1
340 Central Gippsland	—	_		<u> </u>	-			_	1	1
342 Wodonga	—	_	_	_	—	—	13	—	7	20
Intersystem										
PTC of New South Wales										
via Albury		. —	_	_		_	—	_	46	46
Queensland Railways	—	—	—		_		_		25	25
Westrail		—	—	—	—	_	<u> </u>	—	13	13
AN Central Region					-				15	15
Total	_	_	_	_	12		13	3	161	189

		<u> </u>	00')	0 tonnes)		<u></u>				
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Totai freight
		QR	consignm	ents from	Brisbane				(Reg	ion 450)
Intrasystem										
450 Brisbane	-	11	10			20		6	18	65
451 Moreton	—				_	_	2	1	9	12
452 Wide Bay—Burnett	41			-	_	8	4	3	46	102
453 Darling Downs	269					7	_	4	14	294
455 South West	51		—			2		2	20	75
456 Fitzroy	9		5	·		—	4	17	98	133
458 Central West	—	_		_			_		9	g
459 Mackay	5	_			_		53	1	60	119
460 Northern					_	_	10	1	143	154
461 Far North	2	_	_		_	-	64	1	106	173
462 North Western	1	_	_		_	·	_	1	41	43
Intersystem										
All Óther Systems				<u> </u>	11				382	393
Total	378	11	15		11	37	137	37	946	1572
		QR	consignm	ents from	Moreton				(Reg	ion 451)
Intrasystem										
450 Brisbane	-	72	17	13	54	—			33	189
451 Moreton		_	3			_	_			3
453 Darling Downs		_	_						2	2
455 South West	_				_				3	3
460 Northern	-	_	—	_			_		1	1
Intersystem All Other Systems		_	_	_	_	_			7	7
Total		72	20	13	54				46	205

			('00	0 tonnes)			<u></u>			
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		QR cons	ignments f	rom Wide	Bay—Bu	rnett			(Reg	ion 452)
Intrasystem										
450 Brisbane	_	_	—	5	49	_		_	65	119
451 Moreton	—		_	_		· · · · ·	_		1	1
452 Wide Bay-Burnett	3	10	<u> </u>		_	_		_	1	14
456 Fitzroy	·		6	2	14	_	_	_	1	23
459 Mackay	_	_	_	_	1	_	_	_	5	6
460 Northern	_	_	_	_	3	_	_	_	7	10
461 Far North		-	_		4	_	_	_	1	5
Intersystem										
All Other Systems					6				7	13
Total	33_	10	6	7	77				88	191
		QR co	nsignment	s from Da	rling Dow	ns			(Reg	ion 453)
Intrasystem										
450 Brisbane	_	_	2	1023	286	—			46	1357
453 Darling Downs	—	_	—	47	1	_	—	_	_	48
455 South West	—	_	—	1	—	·	_	-		1
456 Fitzroy	—	_		1	—	—	—	_		1
460 Northern	—	_	—	_	-	_	—		1	1
461 Far North		—		—	—	—		_	6	6
Intersystem										
All Other Systems					4					4
Total	_	_	2	1072	291	_	_		53	1418

			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Tota freigh
		QR	consignme	nts from S	outh Wes	st			(Reg	ion 455)
Intrasystem										
450 Brisbane	_		_	104	3				17	124
453 Darling Downs				3				_		3
455 South West			1			_	—			1
Total			1	107	3	_		_	17	128
		Q	R consignm	nents from	Fitzroy				(Reg	ion 456)
Intrasystem										
450 Brisbane			23				_		88	111
451 Moreton	—		2	_				_	_	2
452 Wide Bay—Burnett	5					4	_	_	_	9
453 Darling Downs		_	3					_	_	3
456 Fitzroy	105	10158	352	106	240			_	14	10975
458 Central West	26					1	_	1	1	29
459 Mackay	9		1			12		1	2	25
460 Northern	_		5	_		_			8	13
461 Far North	_		5	2		_			2	9
Intersystem										
All Other Systems									4	4
Total	145	10158	391	108	240	17		2	119	11180

TABLE IV.1—RAIL FREIGHT REGION; PRINCIPAL FLOWS										
REGION: PRINCIPAL FLOWS			OM INDIV	IDUAL R	EGIONS	ву сомм	ODITY GF	NOUP AN	ND DESTI	NATION
······ , ····· · · · · · · · · ·	5 ONLY ^a , 1979	-80 (Cont)								
			('00	0 tonnes)						
					·		<u> </u>			
	Bulk		Other minerals		Other				Other	Total
Destination	liquids	Coal	etc	Wheat	grains	Cement F	ertilisers	Steel	freight	freight
		0.0.0.0	!							
		QH CO	nsignmen	ts from Ce	entral we	st 	·		(Heg	ion 458)
Intrasystem										
450 Brisbane				_	—	_	—	—	9	9
Total	_	_	_	_					9	9
		QR	consignm	ents from	Mackay				(Reg	ion 459)
Intrasystem			-							
450 Brisbane	_		_	_		_	1		4	5
456 Fitzroy	_	100	1	_	31	—	<u> </u>	_		132
459 Mackay	65	14792	14	·· · <u> </u>	381		_	5	249	15506
460 Northern	2	4		_		—	_		_	6
T-4-1	67	14000	15		410					45040
Total	67	14896	15		412			5	253	15649
			consignm	ents from	Northern				(Reg	ion 460)
Intrasystem										
450 Brisbane	_	_	1		_		_		108	109
458 Central West	6	_			_	_	—	_	_	6
459 Mackay	1	_	_	_		13		_	49	63
460 Northern	23	128	3003	-	473	1		12	27	3667
461 Far North	2	1	1	_		25	2			37
462 North Western	90	359	2	_	_	60	_	1	23	535
Intersystem			-							
All Óther Systems	<u> </u>	—	_	—		_	_	_	27	27
Total	122	488	3007		473	99	2	13	240	4444
i otai	122	+00	3007		413	33	۲	10	270	

			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		QR	consignm	ents from	Far North	ו ו			(Reg	ion 461)
Intrasystem										i
450 Brisbane	_		1			_	1		27	29
452 Wide Bay-Burnett			·		_	_			7	7
456 Fitzroy	_					_	_		. 1	1
459 Mackay	_						1		1	2
460 Northern					6	_	1		21	28
461 Far North	_		1	_	243	_	5		15	264
Intersystem			•				-			
All Other Systems									19	19
Total			2		249		8		91	350
·		QR c	onsignmen	ts from No	orth West	ern			(Reg	jion 462)
Intrasystem										
450 Brisbane	_		8	_	_	_			1	9
460 Northern			574						11	575
Total			582	_		_			2	584
	A	N Centra	I Region co	onsignmer	nts from A	delaide			(Reg	ion 570)
Intrasystem										
570 Adelaide	28			14	4	_	_	4	102	152
571 Outer Adelaide	11			_		_	11		3	25
572 Yorke and Lower North	9	_		_	_	_	8		1	18
573 Murray Lands	25	_		_	2		79		20	126
574 South East	13	_		_		3	109		43	168
577 North East	3			_	_	_	1	1	18	23
226 Far West (AN Central Region)	50	_	_	_	3		1	31	85	

· .	·		('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other . minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
Intersystem					,					
PTC of New South Wales										
via Serviceton	_	. —	_		_	_	—		1	1
via Broken Hill	_	_		_	i	_	4	_	41	45
Victorian Railways										
via Pinnaroo	<u> </u>	_		_			3	—	1	4
via Serviceton	, <u> </u>	_	_	_		_	4	2	440	446
via Mt Gambier		_	<u>.</u>	—	_	1	_	_	1	2
Queensland Railways										
via Broken Hill		. —	_	—	<u> </u>	·	· · <u> </u>	··· <u> </u>	33	- 33
Westrail	_	-	_	_		_	2	1	115	118
AN Northern Region	3	—					1	3	126	133
Total	142	_	_	14	6	7	222	12	976	1379
	AN C	entral Re	egion consi	gnments	rom Oute	r Adelaid	е		(Reg	ion 571)
Intrasystem										
570 Adelaide		_	457	35	34	_	_	_	10	536
571 Outer Adelaide	<u> </u>	_	_	_	_	1	_	_	—	1
574 South East		_	_		_	6	_	_		6
577 North East	_			_		8		_	_	8
226 Far West (AN Central										
Region)	_	_	_	_	_	13	_		1	14
Intersystem										
Victorian Railways										
via Serviceton		_	9	_	_	2	_	_	1	12
via Mt Gambier	_	_	—	_	_	1	_			. 1
Westrail	_	_	_	_	_	4	_		3	7
AN Northern Region	_	_	_	_	_	10	_	—	2	12
AN ACT Railway										
via Broken Hill	_		_			2				2
Total			466	35	34	47			17	599

			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
	AN Centr	al Regio	n consignr	nents from	York and	d Lower I	North		(Reg	ion 572)
Intrasystem										
570 Adelaide			_	67	22	_	_		3	92
572 Yorke and Lower North				112	74		2		_	188
573 Murray Lands	_				_		2		_	2
574 South East			2			_	9		2	13
577 North East	_			14	4		16			34
Intersystem										
PTC of New South Wales										
via Broken Hill	_		14	_			_		_	14
Queensland Railways										
via Broken Hill	. —		1	_					_	1
AN Northern Region									1	1
Total	···		17	193	100		29		6	345
	AN C	Central R	egion cons	ignments	from Mur	ray Land	S		(Reg	ion 573)
Intrasystem										
570 Adelaide	_			302	225	_	1		31	559
573 Murray Lands	_			60	10	_			3	73
574 South East	—		_	_	_	_	3		1	4
Intersystem										
PTC of New South Wales										
via Broken Hill	_		_	_	1				1	2
Victorian Railways										_
via Pinnaroo			_	1	1	_	—			2
via Serviceton				7					11	18
Total		_		370	237		4		47	658

			('00	0 tonnes)			· · · · · ·				
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Totai freight	
	AN	Central R	legion cor	signment	s from So	uth East			(Regi	(Region 574)	
ntrasystem											
570 Adelaide	_		11	105	46	_	1		70	233	
573 Murray Lands				17	8	—	_		6	31	
574 South East	<u>.</u>		_	_		<u> </u>	2		2	4	
ntersystem							_				
PTC of New South Wales											
via Mt Gambier	_		2	_		_			55	57	
via Broken Hill	_	<u> </u>	_	_		_		·	19	19	
Victorian Railways											
via Serviceton	_			_		_	_	-	14	14	
via Mt Gambier	_		28		2	_	6		40	76	
Queensland Railways			20		-		Ū				
via Mt Gambier	_		_			_	_		. 14	14	
via Broken Hill				_	·	_	_		6	6	
Westrail	_		, <u> </u>	_		_	_	-	17	17	
otal			41	122	56		9	, —	243	471	
		AN Centra	al Region	consignm	ents from	Eyre			(Regi	ion 575)	
ntrasystem											
575 Eyre	_		654	658	188	_	50	_	2	1552	
· · · · · · · · · · · · · · · · · · ·										<u> </u>	

			00')	0 tonnes)		·					
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight	
	AN Northern Region consignments from Port Augusta—Whyalla									(Region 576)	
Intrasystem											
578 North West			b		_	b		_	b	14	
899 Northern Territory 686 South Eastern (AN			b		_	b			b	19	
Northern Region) Intersystem			b			b		—	b	29	
PTC of New South Wales		b	b			b		b	b	125	
Victorian Railways		b	b			b		b	b	48	
Queensland Railways		b	b			b		b	b	52	
Westrail		b	b			b		b	b	230	
AN Central Region	_	b	b			b	—	b	b	29	
Total		19	39	_		1		370	117	546	
	AN	(Region 577)									
Intrasystem											
570 Adelaide	17			2	8				52	79	
571 Outer Adelaide									1	1	
572 Yorke and Lower North	41	—		6	10	_			_	57	
573 Murray Lands					2		—		_	2	
574 South East			_		—	_		_	3	3	
577 North East 226 Far West (AN Central	2	_	—	127	41	—	-	_	1	171	
Region)	23					_	_	_	1	24	

	· ·		('00	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
Intersystem										
PTC of New South Wales										
via Broken Hill			_	2	2		—		23	27
Victorian Railways										
via Serviceton		_		<u> </u>	·	. —		_	75	75
Queensland Railways										
via Broken Hill		—	—	_	. 		_	—	2	2
AN Northern Region									1	<u>1</u>
Total	83			137	63				159	442
	AN	Northern	Region co	nsignmen	ts from N	orth West	t		(Reg	ion 578)
Intrasystem	N.									
576 Port Augusta-Whyalla	b	1727	—	_	_		<u> </u>	—	b	1732
578 North West	b	_	_	_	—		_		b	5
Intersystem										
Victorian Railways	b	·		_			_	_	b	1
AN Central Region	b								b	31
Total	1	1727							41	1769
_	3	Wes	trail consi	gnments f	rom Perth				(Reg	ion 680)
Intrasystem										
680 Perth	_		5606		8	_	_	—	4	5618
681 South West	8	_	_	_	_	20	9		682	719
682 Lower Great Southern	12	—	1	_	_	10	29	_	54	106
683 Upper Great Southern	39	_		_	_	2	113		25	179

			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
684 Midlands	125	_	_			12	183	_	72	392
686 South Eastern (Westrail)	77	1				16	25	_	65	184
687 Central	7			_		14	54		86	161
Intersystem										
All Other Systems							<u> </u>	23	230	253
Total	268	1	5607	—	8	74	413	23	1218	7612
		Westra	ul consignr	nents from	South W	/est			(Reg	ion 681)
Intrasystem										
680 Perth		1314	1287		1		5	_	213	2820
681 South West	24	460	1171	1	_		19	_	717	2392
682 Lower Great Southern				1	2		17	_		20
683 Upper Great Southern			_				12		1	13
684 Midlands		_		_	_				1	1
686 South Eastern (Westrail)				_	_		_	_	5	5
687 Central							1	_	7	8
Intersystem										
All Other Systems									7	7
Total	24	1774	2458	2	3		54	_	951	5266

			('00	0 tonnes)					·	
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
	We	strail con	signments	from Low	er Great	Southern			(Reg	ion 682)
Intrasystem										
680 Perth	_	_	_	1	9		_	_	58	68
681 South West	_		_	8	3		_		_	11
682 Lower Great Southern	19	_		291	97		34	_	7	448
683 Upper Great Southern	5		—	_	—		_	_	_	5
All Other Systems	_	_	_	_	_		_		1	1
Total	24			300	109		34		66	533
	We	strail con	signments	from Upp	er Great	Southern			(Reg	ion 683)
Intrasystem									•	
680 Perth	_	_		180	40		_		20	240
681 South West	_	_	_	162	5		_	_		167
682 Lower Great Southern	_		_	173	74		_	_	4	251
684 Midlands				4						4
Total		·		519	119				24	662
·		Westra	ail consigr	nments fro	m Midlan	ds	<u> </u>		(Reg	jion 684)
Intrasystem										
680 Perth	—	_	1732	2041	101			—	34	3908
681 South West	—		—	_			_	_	2	2
682 Lower Great Southern	_	—	1	_			_	—	_	1
684 Midlands	—		96	24	4		_		—	124
687 Central	_	_	—	56	_		_	—		56
Intersystem All Other Systems	_	_	_	_	· _	-	_	_	2	2
Total			1829	2121	105				38	4093

			00')	0 tonnes)						
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Tota freight
		Westrail	consignm	ents from	South Ea	stern			(Reg	jion 686)
Intrasystem 680 Perth 686 South Eastern (Westrail)	 97	_	133 343						11 1	144 484
Total	97		476	38	5				12	628
	AN N	orthern F	Region con	signments	from So	uth Easte	rn		(Reg	ion 686)
Intrasystem 576 Port Augusta—Whyalla Intersystem		_	_				_		24	24
AN Central Region						G uestino	_		2	2
Total									26	26
		West	rail consig	nments fro	om Centr	al			(Reg	ion 687)
Intrasystem 680 Perth 681 South West 687 Central	 13		47 55 953	5 203	5 13		 14		17 	74 55 1196
Total	13		1055	208	18		14	_	17	1325

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			00')	0 tonnes)		<u> </u>				
Destination	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
	1 <u>A</u>	N Tasman	ian Region	consignm	nents from	n Hobart			(Reg	ion 790)
Intrasystem										
790 Hobart	. 2			_	. —	—	—	_		2
792 Tamar	—			_	—	—	—	_	11	- 11
794 North Western	41		_	_	_			<u> </u>	47	88
Unspecified							68		44	112
Total	43	_	_	_	_	_	68	_	102	213
	AN	Tasmani	an Region	consignme	ents from	Southern	· · ·		(Reg	ion 791)
Intrasystem										
790 Hobart	_		_	_		_		_	157	157
792 Tamar			_	_	_	_	_	· · · · ·	91	91
Unspecified	· · · · · · · · · · · · · · · · · · ·		· <u> </u>				<u>'</u>	· <u>·</u>	49	49
Total	_				-	_			297	297
	A	N Tasmar	nian Regior	n consignn	nents from	n Tamar			(Reg	jion 792)
Intrasystem										
790 Hobart	_		_	_	_	_	_	2	30	32
792 Tamar	_		_	_	_	_		_	140	140
793 North Eastern	1			_		_	—		1	2
794 North Western	·		10			_	_	_	23	33
Unspecified							. 1		20	21
Total	1		10	_	_		1	2	214	228

		{ 00 }	0 tonnes)						
Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
AN Ta	smanian	Region co	nsignment	s from N	orth Easte	ern		(Reg	jion 793)
	98		_		_	_		65	163
	_	_		_	_	_	_	313	313
_	_		—	_		_	_	5	5
_	71	32			_	_		4	107
		_	<u> </u>					12	12
_	169	32	_	—	—	_		399	600
AN Ta	smanian	Region co	nsignment	s from N	orth Weste	ern		(Reg	ion 794)
_		_	_		39	_		37	76
_	_	_	_	_	6			312	318
—	_	_		_	1		—		1
49	_	—		_	253			27	329
					_	40	_	26	66
49			_		299	40	_	402	790
	AN North	nern Regio	n consign	ments fro	m NT			(Reg	ion 899)
_				_	_	_	_	1	1
_	_		_	_			_	3	3
				_				23	23
_	_	_	_		_	_	-	27	27
	liquids AN Ta 	liquids Coal AN Tasmanian	Bulk minerals liquids Coal etc AN Tasmanian Region co — 98 — — 98 — — 98 — — — — — 71 32 — — — — 169 32 AN Tasmanian Region col — — — — 169 32 AN Tasmanian Region col — — — — 49 — — 49 — — 49 — —	Bulk minerals liquids Coal etc Wheat AN Tasmanian Region consignment	Bulk minerals Other grains Iiquids Coal etc Wheat grains AN Tasmanian Region consignments from N — 98 — — — 98 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — —	Bulk liquids minerals Coal Other etc Other grains Cement AN Tasmanian Region consignments from North Easter — …	Bulk liquids minerals Coal Other etc Other grains Cement Fertilisers AN Tasmanian Region consignments from North Eastern — …	Bulk liquids minerals Coal Other etc Other grains Cement Fertilisers Steel AN Tasmanian Region consignments from North Eastern — …	Bulk liquids minerals etc Other Wheat Other grains Cement Fertilisers Steel Other freight AN Tasmanian Region consignments from North Eastern (Reg - 98 - - - 65 - - - - - 313 - - - - - 313 - - - - - 313 - - - - - 313 - - - - - 313 - - - - - 313 - - - - - 313 - - - - - 12 - 169 32 - - - 312 - - - - 399 - - 312 - - - - - 26 -

a. See definition in Chapter 1.

b. Not available separately but included in total.

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTCN	SW receiv	als in Syd	ney				(Reg	ion 200)
Intrasystem										
200 Sydney	1	1760	245	1	5	_	_	15	770	2797
201 Mt Victoria	_	508	_	1		_	_	_	11	520
202 Gosford		_	—		—	—	<u> </u>	_	13	13
203 Newcastle	_	—	—	_	_	·	1	317	99	417
204 Hunter	<u> </u>	10	_	· · ·	_	_	_	—	115	125
205 Wollongong	1	16	247	<u> </u>	—		3	229	. 11	507
206 Illawarra	—		6	_	_	44	_	—	94	144
207 Richmond—Tweed	_			_	—	_	_		70	70
208 Clarence	—		—	. —	—		—	—	34	. 34
209 Hastings	·	_	·		_	_	—	_	72	72
210 Northern Tablelands	_	_	—		—		—	—	4	4
211 Northern Slopes	_	_		103	13	<u> </u>	_		134	250
212 North Central Plain	_		—	42	6		—	—	38	86
213 Central Macquarie	_	21	—	414	23	_		_	16	474
214 Macquarie—Barwon	—	_		198	6	_	—		8	212
215 Upper Darling	—	_	_	3	1	_	_		10	14
216 Central Tablelands	—	563	· <u> </u>	7	_	167	_	—	10	747
217 Lachlan		_	_	860	36	_	_	—	37	933
219 Snowy—Lower South										
Coast		—			_	_	_	—	5	5
220 Southern Tablelands	_	· <u> </u>	· · · <u> </u>	125	10	· —	- —		21	156
221 Central Murrumbidgee	2	—	—	570	22	_	—	—	24	618
222 Lower Murrumbidgee	_	_	—	107	30	_	—	_	178	315
223 Upper Murray										
(PTCNSW)	·	—	—	20	4	_			1	25
226 Far West (PTCNSW)	_	_	-	_	_		—	—	3	3

110

			00')	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
Intersystem										
Victorian Railways	2	_	9		9	36		1	625	682
Queensland Railways	_			_	8	_			337	345
Westrail					_	_			54	54
AN Central Region			34		2	_	1	4	101	142
AN Northern Region			14					74	6	94
Total	6	2878	555	2451	175	247	5	640	2901	9858
		РТС	NSW rece	eivals in M	t Victoria				(Reg	ion 201)
Intrasystem										
200 Sydney	5		_		_				1	6
206 Illawarra			178			30			_	208
220 Southern Tablelands			109							109
Total	5		287			30			1	323
		PT	CNSW red	ceivals in (Gosford				(Reg	ion 202)
Intrasystem										
200 Sydney	_		_		_	_			2	2
210 Northern Tablelands							_		2	2
211 Northern Slopes			_						1	1
212 North Central Plain	_	_				_	_		5	5
213 Central Macquarie	_								2	2
216 Central Tablelands			_	_		_			3	3
217 Lachlan	—	_			_	_			2	2
220 Southern Tablelands									4	4
Total	_	_				_	_		21	21

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
Origin										
		PT	CNSW rece	eivals in N	ewcastle				(Reg	ion 203)
Intrasystem										
200 Sydney	13	_	_	_	2		_	5	44	64
201 Mt Victoria	_	209			_	_	—	_	_	209
203 Newcastle		12718	_	_	_	_	_	10	_	12728
204 Hunter	_	567	6	109		. , -	. —		3	694
205 Wollongong	56	370	2	_	_		_	125	_	553
206 Illawarra			1		_		_	_	·	10
207 Richmond—Tweed		_	_	—		_	—	_	7	7
208 Clarence	_		_	_	_	_	_	_	3	3
209 Hastings	_		_				·	1		1
210 Northern Tablelands	_		6	3	2	_	_		4	15
211 Northern Slopes	·	35	_	684	127	_		1	5	852
212 North Central Plain	_	_		854	7		<u> </u>		11	872
213 Central Macquarie		145	_	58	12	_	_			215
214 Macquarie-Barwon		_	_	32	1	_		_	1	34
215 Upper Darling	_		23	·			_	_	_	23
216 Central Tablelands		301	_	_	_	26		_	_	327
220 Southern Tablelands	_	<u> </u>	186	_	_	_		_	_	186
222 Lower Murrumbidgee		_		3	1	·	_		2	6
224 Central Murray										
(PTCNSW)	1	_	_		_	_			_	1
226 Far West (PTCNSW)	_	_	109	_	_	_		_	—	109
Intersystem										
Victorian Railways	1	_	_		_	_	_	1	3	. 5
Queensland Railways					.	_	_		10	10
Westrail	_		_				_	_	2	2
AN Central Region		_	_			_	1	5	_	6
AN Northern Region	_	—	_	_	-	·		36		36
Total	71	14345	333	1743	161	35	1	184	95	16968

112

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		F	TCNSW re	ceivals in	Hunter				(Reg	ion 204)
Intrasystem										
200 [°] Sydney	4	—	_		_	_		_	8	12
203 Newcastle	19	_	_	_		_	_		2	21
204 Hunter	·		_	_	_	_	_		6	6
211 Northern Slopes				_			_	_	1	1
212 North Central Plain							_		1	1
Total	23								18	41
		PT	CNSW rece	ivals in We	ollongong)			(Reg	ion 205)
Intrasystem										
200 Sydney	7	_	_	_	2	_		127	18	154
201 Mt Victoria		172	_	_			_		_	172
203 Newcastle	_	_	6	_	_		- 	77	6	89
205 Wollongong	_	2133	_	_		_	_	_		2133
206 Illawarra	_	6	_	_	_	20		_	_	26
213 Central Macquarie	_	144	_	_			_	_	2	146
215 Upper Darling	_		29		_	_		—		29
216 Central Tablelands		287	_	_	_	1	_	2	—	290
217 Lachlan	—	_	_		_			1	—	1
220 Southern Tablelands		—	977	—	_	—	—	_	_	977
221 Central Murrumbidgee	—	—					_	1		1
222 Lower Murrumbidgee 223 Upper Murray			_		-	—		1	—	1
(PTCNSW)		—	—		_	—	—	—	1	1

FLOWS ONLY", 1979-80 (Cont)				-						
-			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
Intersystem										
Victorian Railways	—		5			_		23	6	34
Queensland Railways	_	_	—	_	<u> </u>				1	1
Westrail						_		8	_	8
AN Central Region	—	_	2		_			1		3
AN Northern Region								1		1
Total		2742	1019	- <u> </u>	_2	21		242	34	4067
		P	TCNSW red	ceivals in l	llawarra				(Reg	jion 206)
Intrasystem										
200 Sydney	22	_	_			_		1	18	41
203 Newcastle	_	_	_		_	_	1			1
205 Wollongong	1	_		_						1
211 Northern Slopes	_	_	_	6	_	_				6
213 Central Macquarie	_	46	_	10		_				56
214 Macquarie—Barwon				8	_	_			_	8
217 Lachlan		_	_	1	_	_				1
220 Southern Tablelands			1251	_	_	_			4	1255
221 Central Murrumbidgee	—	—	—	—	-	_	_ _	-	1	1
Intersystem										
Victorian Railways	· <u> </u>		7							7
Total	23	46	1258	25	_	_	1	1	23	1377

			('00	0 tonnes)						
Origin	Bulk liquids	n Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTCNSW	receival	s in Richm	ond—Tw	eed			(Reg	ion 207)
Intrasystem										
200 [°] Sydney	4	_		_	1				22	27
203 Newcastle		_					6	_	1	7
206 Illawarra	_			_	_	24		—	—	24
209 Hastings					_	_		—	1	1
216 Central Tablelands	_				_	2				2
222 Lower Murrumbidgee		_			_	_		—	1	1
Intersystem										
Queensland Railways									10	10
Total	4	ht	—	<u> </u>	1	26	6		35	72
		PTC	NSW rec	eivals in C	Clarence				(Reg	ion 208)
Intrasystem										
200 Sydney	4						1	1	10	16
203 Newcastle	17		_		_		1	_		18
206 Illawarra	lamin. I		_			11		_		11
207 Richmond—Tweed			_	_					1	1
212 North Central Plain	_	_	_	_	_	_		—	1	1
216 Central Tablelands			_	_	_	10		—		10
Intersystem										
Victorian Railways				—	—	_			1	1
Queensland Railways									9	9
Total	21	_		_		21	2	1	22	67

115

			('00	0 tonnes)						
· · · · · · · · · · · · · · · · · · ·	Bulk	n	Other ninerals		Other				Other	Total
Origin	liquids	Coal	etc	Wheat	grains	Cement	Fertilisers	Steel	freight	freight
		PTC	NSW red	eivals in H	lastings				(Reg	ion 209)
Intrasystem										-
200 Sydney	3	—			_		—	_	20	23
203 Newcastle	35		_	_			_		—	35
204 Hunter	_		_	_	· _		_	_	2	2
205 Wollongong	—	—	_	—	_		_	3	· —-	. 3
206 Illawarra	—	—	_	—	_	24	—		—	24
207 Richmond—Tweed	—	—	_	_	_		—	_	2	2
208 Clarence	_	_	_	_	_		_	_	3	3
211 Northern Slopes	—		_		_		—	—	1	1
212 North Central Plain				_	_				1	1
216 Central Tablelands	_	—	_	_		1	—		—	1
222 Lower Murrumbidgee			—		1		_	_	—	1
223 Upper Murray (PTCNSW)			_		_		_	_	1	1
Intersystem										
Queensland Railways		—							1	1
Total	38		_	_	_ 1	25	—	3	31	98

-

			('00	0 tonnes)				_		
Origin	Bulk liquids	r Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTCNSW	receivals	in Northe	rn Tablel	ands			(Reg	ion 210)
Intrasystem										
200 Sydney	3	_							8	11
203 Newcastle	20					-	24	_	1	45
205 Wollongong	_	_	_	_	_	_	39			39
212 North Central Plain		_	_		~		_		1	1
221 Central Murrumbidgee	_		_					_	1	1
223 Upper Murray (PTCNSW)		_		_					1	1
224 Central Murray (PTCNSW)	_		_	_	_	_	_		i	1
Intersystem									•	
AN Central Region		—			—		1			1
Total	23	_	_			_	64	—	13	100
		PTCNS	W receiva	lls in Nort	hern Slop	es			(Reg	ion 211)
Intrasystem										
200 [°] Sydney	15	_	_		_		_	<u> </u>	28	43
203 Newcastle	89		_	_	_		3		1	93
205 Wollongong			_	_			10		_	10
206 Illawarra			_	_	_	15		_	_	15
210 Northern Tablelands	_	—	_	1	1		_		_	2
211 Northern Slopes		10		171	21					202
212 North Central Plain	_	_	_	214	4		_	_		218
213 Central Macquarie	_	_		43	7	_	_	_	1	51
214 Macquarie—Barwon	_	_	_	4			_			4
216 Central Tablelands	_	_	_		_	8	_			8
220 Southern Tablelands				1		_	_	_	—	1
Intersystem										
AN Central Region				2				-	1	3
Total	104	10		436	33	23	13	_	31	650

· · ·			('00	0 tonnes)						-
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTCNS	W receivals	s in North	Central F	Plain			(Reg	ion 212)
Intrasystem										
200 Sydney	5	_	_	_		_	_	_	11	16
203 Newcastle	40	_		_	_		_		_	40
211 Northern Slopes	_		_	13	_	_	_	. —	_	13
212 North Central Plain	_		_	165	_	_	_		_	165
214 Macquarie—Barwon		_	_	124		_	_	_	_	124
217 Lachlan		_	—	1	_	_	_	_	_	1
223 Upper Murray										
(PTCNSW)				1	_		_			1
Total	45	_		304	_		_	_	11	360
		PTCNS	W receival	s in Centr	al Macqu	arie			(Reg	ion 213)
Intrasystem										
200 Sydney	131	_	_	_	_	_	_	1	22	154
203 Newcastle	22	_		_	_	_	5	_		27
205 Wollongong	_	_	_	_	_	_	9			9
206 Illawarra	_	_	_	_	_	11	_	_	_	11
213 Central Macquarie	_	—	_	3	_	_	_	—	_	3
214 Macquarie—Barwon	_	_	_	1	_		. —	_	. —	. 1
215 Upper Darling	_	_	_	_	_	_	1			1
216 Central Tablelands						5				5
Total	153	_	_	4	_	16	15	1	22	211

			('00	0 tonnes)						
Origin	Bulk liquids	r Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTCNSW	receivals	in Macqu	arie—Bar	won			(Reg	ion 214)
Intrasystem 200 Sydney 203 Newcastle	28 2			_		_	 	_	6	34 2
Total	30	_	_	_	_			_	6	36
		PTCNS	SW receiv	als in Upp	oer Darlin	g			(Reg	ion 215)
Intrasystem 200 Sydney	18				_	_			4	22
Total	18	_	_	_		_			4	22
		PTCNSW	receival	s in Centra	al Tablela	inds			(Reg	ion 216)
Intrasystem 200 Sydney 203 Newcastle 205 Wollongong 211 Northern Slopes 213 Central Macquarie 214 Macquarie—Barwon 215 Upper Darling 216 Central Tablelands 217 Lachlan 220 Southern Tablelands	78 4 	 5	 19 	1 1 4 4			1 5 	5 	20 	98 5 10 1 2 19 5 4 1

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			(`00	0 tonnes)						
October	Bulk		Other ninerals		Other				Other	Tota
Origin	liquids	Coal	etc	Wheat	grains	Cement	Fertilisers	Steel	freight	freigh
Intersystem										
Victorian Railways	—	_				_	_	_	1	1
Queensland Railways	—	—	—		—	—	_	_	2	2
Westrail		_			_	. –		_	<u> </u>	1
Total	. 82		19	9	_	_	6	5	24	150
· .		PTC	NSW re	ceivals in	Lachlan				(Reg	ion 217)
Intrasystem										
200 Sydney	82		_	_	· -	· · ·	· _ ····	· ·· <u> </u>		
203 Newcastle	_	_	_	_	_	_	27	_	_	27
205 Wollongong	_	_	_	_	_		18	_		18
211 Northern Slopes	_	—	_	11	_	_	. —	_		11
212 North Central Plain	_	_	—	3	_	_	_		_	3
213 Central Macquarie	-	—	_	44	—	_	_	—	_	44
214 Macquarie—Barwon		_	_	16	_	_	_	_	_	16
215 Upper Darling	—	-	_	20	_	_	_		_	20
217 Lachlan	_	_	_	201	_	_	_		—	201
220 Southern Tablelands	_	—	_	1	_	_		_		1
Intersystem										
Victorian Railways	_	—	_	_	—	—	-		1	1
Queensland Railways	—	-	_	_	_	—		—	1	1
AN Central Region			_		_			-	1	1
Total	82			296	_	_	45	—	18	441

			('00	0 tonnes)						
Origin	Bulk liquids	n Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
·		PTCN	SW rece	ivals in Qu	leanbeya	n			(Reg	ion 218)
Intrasystem										
200 Sydney	29	_	_	_	-		_	—	15	44
203 Newcastle		_					1	—		1
205 Wollongong	9				-	_				9
210 Northern Tablelands Intersystem			-	—				-	1	1
Westrail								-	1	1
Total	38						1		17	56
	PT	CNSW rece	eivals in	Snowy—L	ower Sou	th Coast			(Reg	ion 219)
Intrasystem										
200 Sydney	12								4	16
203 Newcastle	_	1	_		_	_	5			6
205 Wollongong	4					_	18			22
215 Upper Darling			_	_	_		1		_	1
221 Central Murrumbidgee									1	1
Total	16	1			_	_	24		5	46

			('00	0 tonnes)						
Origin	Bulk liquids	n Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PTCNSW	receivals	in Southe	rn Tablel	ands			(Reg	ion 220)
Intrasystem										
200 Sydney	59	_	_		_	_		_	11	70
203 Newcastle	1	_	_			_	4		_	5
205 Wollongong	15	—	_			. —	20		_	35
211 Northern Slopes		_	_	1	_	_		-		1
213 Central Macquarie		1	_			-		_	_	1
217 Lachlan		_	_		_	_			1	1
219 Snowy—Lower South										
Coast		_	_			.		—	2	2
220 Southern Tablelands		_	_		_	_		_	4	4
221 Central Murrumbidgee									3	3
Total	75	1		1			24		21	122
		PTCNSW r	eceivals i	in Central	Murrumb	idgee			(Reg	ion 221)
Intrasystem										
200 [°] Sydney	28	_	_	_	_	_	—		23	51
201 Mt Victoria		_	_	3	_			_	_	3
203 Newcastle	1	18	_		_	_	20	_	_	39
205 Wollongong	7	<u> </u>	_		_	_	10		—	17
210 Northern Tablelands	-	_		-	_	_		<u> </u>	3	3
213 Central Macquarie		-	_	5	_	_		_	—	5
214 Macquarie—Barwon	-	_		9		_		_	_	9
217 Lachlan		—	_	149	—	_		_	—	149

			00')	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
220 Southern Tablelands	·	_	_	1	_		_	_	_	1
221 Central Murrumbidgee	_	_	_	165	1	—	_	_		166
222 Lower Murrumbidgee 223 Upper Murray	_			65	_	-	—		_	65
(PTCNSW)	_	_	_	25	_	_	_			25
Intersystem										
Victorian Railways		1	2	23					1	27
Total	36	19	2	445	1		30	_	27	560
		PTCNSV	V receivals	in Lower	Murrumbi	dgee			(Reg	ion 222)
Intrasystem										
200 Sydney	3	—	—	_	—	_	3		22	28
203 Newcastle	—	_	_		_	—	3	—	_	3
205 Wollongong	5		—	—		_	_	4		9
207 Richmond—Tweed	—	—					1	—		1
212 North Central Plain				—	—	—	_	—	1	1
Intersystem				-						
Victorian Railways		_		18					. —	18
Total	8			18	_		7	4	23	60
		PTC	NSW receiv	als in Up	per Murra	y			(Reg	ion 223)
Intrasystem 223 Upper Murray (PTCNSW)		_	7	_	_	_	_	2	_	9
Total			7	_	_			2	_	9

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		Vic	Rail receiva	lls in Upp	er Murray				(Reg	jion 223)
Intrasystem 331 Barwon			_	_	_		1		_	1
Total	_				_	· <u> </u>	1		_	1
·		PTC	NSW receiv	als in Cen	tral Murra	ay			(Reg	jion 224)
Intrasystem 207 Richmond—Tweed 209 Hastings 210 Northern Tablelands 212 North Central Plain Intersystem Victorian Railways Total							1 1		1 1 1 	2 1 1 5 10 10 ion 224)
		VIC		s in Cent	ariviuriay				(heg	1011 224)
Intrasystem 330 Melbourne 331 Barwon 337 Goulburn Intersystem PTC of New South Wales via Albury	_ _ _ 1		1		 		1 5 2		3 	4 5 1 3
Total	1		1				. 8		3	13

124

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Tota freight
		VicRa	il receival	s in Murra	yDarlin	g			(Reg	ion 225)
Intrasystem 330 Melbourne			<u> </u>	_	_			······	1	1
Total			—			_	_	_	1	1
		PT	CNSŴ red	eivals in f	ar West				(Reg	ion 226)
Intrasystem 200 Sydney 203 Newcastle 209 Hastings 211 Northern Slopes	4 							3 	1 15 3	5 3 15 3
Total	4	_	_		—		_	3	19	26
		AN Cen	tral Regio	n receival	s in Far V	/est			(Reg	ion 226)
Intrasystem 570 Adelaide 571 Outer Adelaide 577 North East Intersystem AN Northern Region	50 — 23 —		2			3 13 —		1 7	31 1 1	85 14 24 9
Total	73	_	2	_		16	_	8	33	132

-			('00	0 tonnes)						
Origin	Bulk liquids	n Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		PT	CNSW re	ceivals in	Albury				(Reg	ion 227)
Intrasystem										
200 Sydney	_	_	_	_		_	_	_	1	1
206 Illawarra		<u> </u>	_	_		9	_	_	_	- 9
213 Central Macquarie		-	<u> </u>	7	<u> </u>		_			7
214 Macquarie—Barwon		_	_	10		_	_	_	_	10
217 Lachlan	_		_	1		_	_	_	_	1
221 Central Murrumbidgee				4			—		_	4
Total		. —	_	22		9		_	1	32
		AN ACT	Railway	receivals	in Canbe	rra			(Reg	ion 228)
Intersystem										
PTC of New South Wales	(b)	_	_	_		(b)	_	_	(b)	173
Victorian Railways	(b)	·	_			() (b)			(b)	30
AN Northern Region	(-)			-		(2)			(-)	50
via Broken Hill	(b)	_	· <u>· ·</u>	_		(b)	_		(b)	2
Westrail	(b)	_	_			(b)			(b)	2
Total	163	_		_	_	31		_	13	207

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		V	icRail recei	vals in Me	lbourne				(Reg	ion 330)
Intrasystem										
330 Melbourne	_	_	_	6	_	_	—	54	4	64
331 Barwon				_	8	49 5	13	96	86	698
332 South Western		_	1	3	1	_		_	59	64
333 Central Highlands		20	26	4	3	_	_	1	81	135
334 Wimmera	_		_	38	58	_	_		1	97
335 Northern Mallee			16	105	40		1		53	215
336 Loddon—Campaspe		_	_	19	37	_	_		85	141
337 Goulburn	_	_	435	8	7	_		_	99	549
338 North Eastern				1	1		_		28	30
339 East Gippsland	_	_	1	_	_	_	—	_	147	148
340 Central Gippsland		545		1	_		_	_	72	618
341 East Central	_	_	191	_						191
342 Wodonga	_	_		_	_	_		3	48	51
223 Upper Murray (VicRail)		_	_	1	2	_	_	_	_	3
224 Central Murray (VicRail)	_		_	14	—		_	_	58	72
225 Murray-Darling (VicRail)	_	_	_	6	_		_			6
Intersystem										
PTC of New South Wales										
via Albury	18	10	16	_		_	2	441	513	1000
via Tocumwal	_			1	_		_	_		1
Queensland Railways	_	_	_	_	_	_	<u> </u>		44	44
Westrail		_		_	_	_	_	1	75	76
AN Central Region	119	_	34	6		2	2	5	364	532
AN Northern Region		_	1				_	4	11	16
Total	137	575	721	213	157	497	18	605	1828	4751

Appendix IV

			('00	0 tonnes)				-		-
Origin	Bulk liquids	r Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		Vi	cRail rece	eivals in B	arwon				(Regi	ion 331)
Intrasystem				-						
330 Melbourne	9	_	_	85	51	_	· <u>·</u>	12	6	163
332 South Western	2	—	—	13	5		—	_	5	25
333 Central Highlands	—	—	1	25	12	_	—	<u>·</u>	3	41
334 Wimmera	_	_	—	104	44	—	—	—	2	150
335 Northern Mallee	_		80	674	24	—	—	1	1	780
336 Loddon—Campaspe		<u></u>		369	71	_			4	444
337 Goulburn	_	_	_	220	32	_	<u> </u>	—	—	252
338 North Eastern		_	—	170	26	_	<u></u>	—		196
339 East Gippsland	. —		—	2	1	—	—	—	1	4
340 Central Gippsland		20	_	3		—			1	24
342 Wodonga	_		—	—	12	_	—	—	1	13
223 Upper Murray (VicRail)	—	—	—	143	50	_	_		—	193
224 Central Murray (VicRail)	_	—	—	78	5	_	—	—	14	97
225 Murray—Darling (VicRail)		—		13	2	_			—	15
ntersystem										
PTC of New South Wales										
via Albury	—	3	—	107	12	-	—	39	1	162
via Tocumwal	·	_		296	40	_	_	_	—	336
AN Central Region	—	_	1	—				—	4	5
AN Northern Region	—		—		—	—	—	34	_	34
Total	11	23	82	2302	387			86	43	2934

			('00	0 tonnes)						
	Bulk		Other		Other				Other	Tatat
Origin	liquids	Coal	ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		VicRa	il receiva	ls in Sout	h Western)			(Reg	ion 332)
Intrasystem										
330 Melbourne	3	_		1		_		3	22	29
331 Barwon	4	_			_	7	10	—		21
332 South Western				5	10	_	37		1	53
333 Central Highlands		_		20	6			_	1	27
334 Wimmera				923	73	_			_	996
335 Northern Mallee				69	2					71
336 Loddon—Campaspe				122	6					128
337 Goulburn		_		1	1	_				2
339 East Gippsland						_		_	1	1
340 Central Gippsland		48			_				_	48
342 Wodonga		_		_				—	4	4
Intersystem										
PTC of New South Wales										
via Tocumwal		_	~~~	1	-	_		_		1
AN Central Region	1				2	2			6	11
Total	8	48		1142	100	9	47	3	35	1392

TABLE IV.2—RAIL FREIGHT RECEIVALS IN INDIVIDUAL REGIONS: BY COMMODITY GROUP FLOWS ONLY ^a , 1979-80 (Cont)	PAND ORIGIN REGION; PRINC	CIPAL

· · · · · · · · · · · · · · · · · · ·										
ABLE IV.2-RAIL FREIGHT REC	CEIVALS IN		UAL REG	IONS: BY	соммо	DITY GRO	OUP AND O		GION; PRI	NCIPAL
LOWS ONLY ^a , 1979-80 (Cont)										
			('00	0 tonnes)						
······································			Other							
	Bulk		minerals		Other				Other	Total
Origin	liquids	Coal	etc	Wheat	grains	Cement	Fertilisers	Steel	freight	freight
		VicRai	I receivals	in Centra	I Highlan	ds			(Reg	ion 333)
ntrasystem										
330 Melbourne	14	_		—	1			10	27	52
331 Barwon	8	_	_		17	2	5		1	33
332 South Western		—	_	. —	<u> </u>	_	11	_	_	11
333 Central Highlands	_	<u> </u>	1	8	·	_	_		1	10
334 Wimmera	_			14	68		—	—	_	82
335 Northern Mallee		_	1	38	1		—		_	40
336 Loddon—Campaspe	_	_	_	6	·	—		_	—	6
339 East Gippsland		_	1	_	_		_	_	_	1
340 Central Gippsland	_	12		—	_	—	—	_	—	12
224 Central Murray (VicRail)		_		4	_	_	_	_		4
225 Murray—Darling (VicRai	—		—	3					_	3
ntersystem										
Westrail	_		—	_	_	_		_	1	1
AN Central Region		· <u> </u>	2	1	2				1	6
	22	12	5	74	89	2	16	10	31	261

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		١	/icRail rece	ivals in Wi	mmera				(Reg	ion 334)
Intrasystem										
330 Melbourne	8	_	_	_		_	8	1	12	29
331 Barwon	7			_	_	6	9	_	_	22
332 South Western	1	_		1		_	64	_		66
333 Central Highlands		_	_		_		_		4	4
334 Wimmera			_	110	37	_	_	_	_	147
336 Loddon—Campaspe		_		_	_		_		1	1
340 Central Gippsland	<u> </u>	3		_	_		<i>,</i> —	_		3
Intersystem		-								-
AN Central Region	2	—			—	_	4	_	_	6
Total	18	3	_	111	37	6	85	1	17	278
		VicF	ail receival	s in North	ern Malle	e			(Reg	ion 335)
Intrasystem										
330 Melbourne	60	_	_		_	_	13		20	93
331 Barwon	13	_	_		_	6	15	_		34
332 South Western					—	_	3		_	3
333 Central Highlands	_	_	1	_	_	_	_	_	1	2
335 Northern Mallee				1	1	_				2
339 East Gippsland			_			_	<u></u>		4	4
340 Central Gippsland	_	1	_	_	_			_		1
Intersystem										
AN Central Region	_	_	_	_	_	_	1	_		1
AN Northern Region		_		_				5		5
Total	73	1	1	1	1	6	32	5	25	145

			00')	0 tonnes)						
Origin	Bulk liquids	n Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		VicRail r	eceivals	in Loddon	—Campa	spe		-	(Reg	ion 336)
Intrasystem										
330 Melbourne	41	_	_	_	_	_	4	4	36	85
331 Barwon	_	_	_	_	_	27	49	_	_	76
332 South Western		_	_	_	—	_	_	_	1	1
333 Central Highlands	_		·	_	_		_	_	1	1
334 Wimmera	_	_	·	47	້ 5	· <u> </u>	_	·	_	52
335 Northern Mallee		_	_	145	11	_	_	_	1	157
336 Loddon—Campaspe	_	_	_	39	3	_	_		_	42
340 Central Gippsland		6	_	_	_	_	_		_	6
224 Central Murray (VicRail)		_	_	7	123	_	_	_	_	130
225 Murray—Darling (VicRail)	_	_	_	4	_	_		_	_	4
Intersystem										
PTC of New South Wales										
via Albury	—			—	_ `		_	1	_	1
Total	41	6	_	242	142	27	53	5	39	555
		Vic	Rail rece	ivals in G	oulburn				(Reg	jion 337)
Intrasystem										
330 Melbourne	20	_	_	_		_	4	2	28	54
331 Barwon		_			_	24		~	20	120
332 South Western	_		_	_	_	24	6	_		6
337 Goulburn		_		_	_	_			1	1
338 North Eastern	_	_	_	_	_	_			1	1
340 Central Gippsland	_	23	_		_	_		_		23
342 Wodonga	_	20							1	1

				0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
Intersystem										
PTC of New South Wales								10		
via Albury		_	—		_	_	_	19		19
AN Northern Region									1	1
Total	20	23				24	106	21	32	226
		Vic	Rail receiv	als in Nort	h Eastern	l			(Reg	jion 338)
Intrasystem										
330 Melbourne	7	_	<u> </u>	_	_	_	2	_	7	16
331 Barwon			_	_	_	8	21			29
332 South Western			_	_			1	_		1
340 Central Gippsland		14				_	_	—		14
Intersystem										
AN Central Region			3							3
Total	7	14	3			8	24		7	63
		VicF	Rail receiva	ls in East	Gippsland	d			(Reg	jion 339)
Intrasystem										
330 Melbourne	6	_				_	-	8	29	43
331 Barwon		_	_		_	12	43	_		55
332 South Western		—		_		—	1	—	_	1
336 Loddon—Campaspe	_			_	_	_	—	—	1	1
339 East Gippsland				_		—	<u> </u>	_	1	1
340 Central Gippsland		9								9
Total	6	9		—	_	12	44	8	31	110

			('00	0 tonnes)							
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight	
		VicRail receivals in Central Gippsland									
Intrasystem					-						
330 Melbourne	7	_	_	_			_	31	79	117	
331 Barwon	_		18		_	1	67	_		86	
335 Northern Mallee	_	_	13		_		_	_		13	
336 Loddon—Campaspe	_	_			_		_	_	1	1	
339 East Gippsland	_	_	18	_	_		_	_		18	
340 Central Gippsland	_	60		_	_		_	_	1	61	
342 Wodonga	_	—	—	_	_				1	1	
Intersystem PTC of New South Wales											
via Albury	—	1	_	_			_	7	-	8	
Westrail	<u> </u>	_	1	_	_		_	_		1	
AN Central Region	17							2		19	
Total	24	61	50	_		1	67	40	82	325	

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		(Reg	(Region 341)							
Intrasystem										
330 Melbourne						_	_	2	4	6
331 Barwon		_			_	1	6			7
332 South Western		_	_	1	_	_	1	_		2
333 Central Highlands				3	_	_			_	3
334 Wimmera				8		_		_		8
336 Loddon—Campaspe		_		8				_	_	8
337 Goulburn	_	_		3	_	_		_		3
339 East Gippsland	_		_	1	_	_		_		1
340 Central Gippsland		_		1	_			_		1
224 Central Murray (VicRail)	_	_		5		_		_		5
Intersystem PTC of New South Wales										-
via Albury				1	_				1	2
Total				31		1	7	2	5	46
		Vic	Rail recei	vals in Wo	odonga				(Reg	ion 342)
Intrasystem										
330 Melbourne	76	_			_		1	2	19	98
331 Barwon	_					48	37		_	85
340 Central Gippsland	_	1	<u> </u>		_	_			_	1
342 Wodonga	_	_	_		_	_	13	_	7	20
Intersystem										
PTC of New South Wales										
via Albury									7	7
Total	76	1			_	48	51	2	33	211

Appendix IV

TABLE IV.2—RAIL FREIGHT RECEIVALS IN INDIVIDUAL REGIONS: BY COMMODITY GROUP AND ORIGIN REGION; PRINCIPAL	
FLOWS ONLY ^a , 1979-80 (Cont)	

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
···			QR receiv	als in Bris	bane				(Reg	ion 450)
Intrasystem										
450 Brisbane	·	11	10			20	_	6	18	65
451 Moreton	_	72	17	13	54	_		_	33	189
452 Wide Bay-Burnett	_			5	49	_	- <u> </u>		65	119
453 Darling Downs	_		2	1023	286			_	46	1357
455 South West			`	104	3	_	· <u>·</u>	_	17	124
456 Fitzroy		_	23	. —	—	_	_		88	111
458 Central West	_	_		_	_	_	_	_	9	9
459 Mackay	_	—	_		_	· _	1	_	4	. 5
460 Northern	_		. 1	·	_	_	—	_	108	109
461 Far North	—	_	1		_	_	1	_	27	29
462 North Western		_	8	_	· _	-	—		1	9
Intersystem										
PTC of New South Wales	_	1	28		_		2	396	431	858
Victorian Railways	_		—	_		_	—	_	219	219
Westrail	—		—	—	_	—	_	_	з	3
AN Central Region		. —	. 18		—		—	_	39	57
AN Northern Region	·							45	1	46
Total		84	108	1145	392	20	4	447	1109	3309
			QR receiv	als in Mo	reton				(Reg	jion 451)
Intrasystem										
450 Brisbane	_	_	_		_	_	2	1	9	12
451 Moreton	_		3	_		_		_		3
452 Wide Bay-Burnett	_	_	_	_	_	_	_		1	1
456 Fitzroy			2				<u> </u>			2
Total	_		5	·	_		2	1	10	18

136

			00')	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		QR	eceivals in	Wide Bay	-Burnet	t			(Reg	ion 452)
Intrasystem										
450 Brisbane	41					8	4	3	46	102
452 Wide Bay-Burnett	3	10							1	14
456 Fitzroy	5	—	_		_	4		_		9
461 Far North			_			_	_	_	7	7
Intersystem PTC of New South Wales								4	2	6
Total	49	10			_	12	4	7	56	138
		QF	R receivals	in Darling	Downs				(Reg	ion 453)
Intrasystem										
450 Brisbane	269		_		_	7	_	4	14	294
451 Moreton	—					_		—	2	2
453 Darling Downs			—	47	1	_	—	_		48
455 South West		-		3	_	_	—			3
456 Fitzroy			3							3
Total	269		3	50	1	7		4	16	350
		(R receiva	ls in South	West				(Reg	ion 455)
Intrasystem										
450 Brisbane	51				_	2		2	20	75
451 Moreton	_			_	_			_	3	3
453 Darling Downs	_		_	1						1
455 South West			1				<u> </u>			1
Total	51		1	1		2	_	2	23	80

			('00	0 tonnes)						
Origin	Bulk liquids	Ċoal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		QR receivals in Fitzroy								
Intrasystem							-			
450 Brisbane	9	_	5	_	_	_	4	17	98	133
452 Wide Bay-Burnett	·	_	6	2	14	_		_	1	23
453 Darling Downs		_	. —	1		_	_	-		1
456 Fitzroy	105	10158	352	106	240	_	_	_	14	10975
459 Mackay	-	100	1		31	_	_	—	·	132
461 Far North				_	_	_		_	1	1
Intersystem										
PTC of New South Wales				_	_			22	4	26
AN Northern Region								1		1
Total	114	10258	364	109	285		4	40	118	11292
			QR receival	s in Centra	al West				(Reg	ion 458)
Intrasystem										
450 Brisbane			_	_		—	_	_	9	9
456 Fitzroy	26	_	<u>.</u>			1		1	1	29
460 Northern	6							<u> </u>	_	66
Total	32	_	_			1	_	1	10	44

			00')	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
			QR recei	vals in Mad	ckay				(Reg	ion 459)
Intrasystem										
450 Brisbane	5				_		53	1	60	119
452 Wide Bay—Burnett					1				5	6
456 Fitzroy	9		1	_		12		1	ž	25
459 Mackay	65	14792	14		381		_	5	249	15506
460 Northern	1				_	13			49	63
461 Far North			_	_	_		1		1	2
Intersystem										
PTC of New South Wales	_		_	_	_		5	12	3	20
AN Northern Region								1		1
Total	80	14792	15		382	25	59	20	369	15742
			QR receiv	als in Nort	hern				(Reg	ion 460)
Intrasystem										
450 Brisbane			_	_	_		10	1	143	154
451 Moreton			_	_	_		_		1	1
452 Wide Bay—Burnett			_		3				7	10
453 Darling Downs							_	_	1	1
456 Fitzroy	_		5	-	_		_		8	13
459 Mackay	2	4			_		—			6
460 Northern	23	128	3003		473	1		12	27	3667
461 Far North					6		1		21	28
462 North Western	_		574	—	_		—	—	1	575
Intersystem										
PTC of New South Wales			—	—	—		5	27	3	35
AN Northern Region	 							2		2
Total	25	132	3582	_	482	1	16	42	212	4492

			('00	0 tonnes)						
Origin	Bulk	Coal	Other minerals etc	Wheat	Other grains	Comont	Fertilisers	Steel	Other	Total
Origin	liquids	- <u> </u>				Cement	rennisers	2/66/	freight	freight
		·	2R receive	als in Far I	North				(Heg	ion 461)
Intrasystem										
450 Brisbane	2						64	1	106	173
452 Wide Bay—Burnett	—		· · · · · <u>·</u>	· · ·	4	—	- .		· 1 ·	5
453 Darling Downs			_	_		_	_		6	6
456 Fitzroy			5	2					2	9
460 Northern	2	.1.	. 1	_		25	2 5		6	37
461 Far North	·		1	_	243	—	5		15	264
Intersystem										
PTC of New South Wales	_		_				11	15	4	30
AN Northern Region								2		2
Total	4	1	7	2	247	25	82	18	140	526
		QR	receivals	in North	Western				(Reg	ion 462)
Intrasystem										
450 Brisbane	1		_					1	41	43
460 Northern	90	359	2	_		60	_	1	23	535
Intersystem		000	-					•		
PTC of New South Wales					<u> </u>		·	13		13
Total	91	359	2	_		60	-	15	64	591

140

			00')	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		AN Ce	ntral Regio	n receival	s in Adela	aide			(Reg	jion 570)
Intrasystem							•			
570 Adelaide	28	_	<u></u>	14	4		<u> </u>	4	102	152
571 Outer Adelaide			457	35	34	_			10	536
572 Yorke and Lower North			—	67	22	_	-	_	3	92
573 Murray Lands		_		302	225		1		31	559
574 South East		_	11	105	46	_	1		70	233
577 North East	17	—	_	2	8				52	79
226 Far West (AN Central Region)		_	1	—	4		-	1	31	37
Intersystem										
PTC of New South Wales										
via Broken Hill		8		—	-	—	20	123	44	195
Victorian Railways										
via Serviceton			2	—	-	8		116	315	441
via Mt Gambier			11	_	—	_	—	—		11
Queensland Railways										
via Broken Hill			-	—	-		-		9	9
Westrail			—		-			10	41	51
AN Northern Region			12					8	96	116
Total	45	8	494	525	343	8	22	262	804	2511

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement F	ertilisers	Steel	Other freight	Total freight
	A	N Centra	al Region re	eceivals in	Outer Ac	telaide			(Reg	ion 571)
Intrasystem										
570 Adelaide	11	_	_	_	—	-	11		3	25
571 Outer Adelaide	_		'	_		1	_	_	_	- 1
577 North East		_		_	_				1	1
Intersystem										
PTC of New South Wales via Broken Hill		_		·	_	-	_	_	1	1
Victorian Railways via Serviceton									2	2
Total	11					1	11		7	30
	AN C	entral Re	egion receiv	als in Yor	ke and Lo	ower North			(Reg	ion 572)
Intrasystem										
570 Adelaide	9			_		_	8		1	18
572 Yorke and Lower North	_	_	_	112	74	_	2	_		188
577 North East	41			6	10	_	_		_	57
226 Far West (AN Central Region)	_	—	·	_	_	_	_		2	2
Intersystem										
PTC of New South Wales										
via Broken Hill	<u> </u>				· <u> </u>	—	2	_	1	3
Victorian Railways										
via Serviceton	_	_	·	_	—	_			1	1
via Mt Gambier	_	-				_	1	-		1
AN Northern Region									3	3
Total	50	_	_	118	84	_	13	_	8	273

					·					
			('00	0 tonnes)						
Origin	Bulk liquids	r Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		AN Central	Region	receivals in	n Murray	Lands			(Reg	ion 573)
Intrasystem										
570 Adelaide	25				2	_	79		20	126
572 Yorke and Lower North	_		_	—	_	_	2	—		2
573 Murray Lands				60	10				3	73
574 South East			—	17	8	the transf	P. 199.4		6	31
577 North East	—	_		_	2			-		2
Intersystem										
PTC of New South Wales									-	_
via Serviceton		_			_	_	—		5	5
via Broken Hill							-		1	1
Victorian Railways									-	•
via Serviceton					—		3		5	8
via Mt Gambier			_	_	—		9	—		9
AN Northern Region	—		—	—					2	2

77

25

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22

93

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TABLE IV.2—RAIL FREIGHT RECEIVALS IN INDIVIDUAL REGIONS: BY COMMODITY GROUP AND ORIGIN REGION; PRINCIPAL FLOWS ONLY^a, 1979-80 (Cont)

Total

259

			00')	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
	<u>_</u>	AN Cent	ral Region	receivals	in South	East				ion 574)
Intrasystem										
570 Adelaide	13	<u>.</u>		_	_	3	109	_	43	168
571 Outer Adelaide				_	_	õ		_		6
572 Yorke and Lower North	_		2	_	_	_	9	_	2	13
573 Murray Lands	_		_				3		1	4
574 South East	_	—			—	·	2	_	2	4
577 North East	_			_		_	_	_	3	3
Intersystem PTC of New South Wales via Mt Gambier		_		_	_	_	-	_	3	3
Victorian Railways via Serviceton	_			_	_	_	1	_	3	4
via Mt Gambier						3	47	_	1	51
AN Northern Region	_	_		_		-	-	_	1	1
Total	13	_	2		_	12	171		59	257
		AN C	entral Reg	ion receiva	als in Eyr	e			(Reg	ion 575)
Intrasystem										
575 Eyre			654	658	188		50		2	1552
Total	_	_	654	658	188	_	50		2	1552

			00')	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
	AN N	orthern R	egion rece	vals in Po	rt August	a—Whya	la		(Reg	ion 576)
Intrasystem										
578 North West	b	1727	b	_		b	b		b	1732
899 Northern Territory	b	_	b		_	b	b	_	b	1
686 South Eastern (AN Northern Region)	b		b	_	_	b	b,	—	b	24
Intersystem PTC of New South Wales										
and AN Central Region	b		b	—	—	b	b	48	b	97
Queensland Railways	b	_	b		_	b	b		b	1
Westrail	b		b			b	b	22	b	44
Total	b	1727	b			b	b	70	b	1899
		AN Cen	tral Region	receivals	in North	East			(Reg	ion 577)
Intrasystem										
570 Adelaide	3	_		_	_		1	1	18	23
571 Outer Adelaide		_	_	<u> </u>	_	8	—	—		8
572 Yorke and Lower North	_			14	4		16	—	—	34
577 North East	2	_	_	127	41	_		—	1	171
226 Far West (AN Central Region)			709	—		—	—	—	2	711
Intersystem										
PTC of New South Wales										
via Broken Hill	_	_	—		_		_	_	4	4
Victorian Railways										
via Serviceton	_	_		—					11	11
AN Northern Region			—					_	3	3
Total	5	_	709	141	45	8	17	1	39	965

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		AN North	nern Regior	n receivals	in North	West			(Reg	ion 578)
Intrasystem										
576 Port AugustaWhyalla	b		b	_		b	b	_	b	14
578 North West	b		b	· _	·	b	b	_	b • •	5
Intersystem										
AN Central Region	b		b			b	b		b	44
Total	b		b			b	b	<u> </u>	b	63
			Westrail re	ceivals in	Perth				(Reg	ion 680)
Intrasystem										
680 Perth	—		5606	_	8	_			4	5618
681 South West	_	1314	1287		1	_	5		213	2820
682 Lower Great Southern	—	-		1	9	—		_	58	68
683 Upper Great Southern	_	-	—	180	40	—	—	_	20	240
684 Midlands	_	-	1732	2041	101	—		_	34	3908
686 South Eastern (Westrail)		-	133		—	—	—		11	144
687 Central	—	-	47	5	5	_	_	-	17	74
Intersystem										
All Other Systems						3		178	683	864
Total	_	1314	8805	2227	164	3	5	178	1040	13736

			('00	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Tota freigh
		We	strail recei	vals in So	uth West				(Reg	ion 681)
Intrasystem										
680 Perth	8	_				20	9		682	719
681 South West	24	460	1171	1	_		19		717	2392
682 Lower Great Southern	_		_	8	3	_		_		11
683 Upper Great Southern		_	_	162	5					167
684 Midlands	_				_	_	_		2	2
687 Central	_	_	55	_	_		_		_	55
Intersystem										
All Other Systems									1	1
Total	32	460	1226	171	8	20	28		1402	3347
		Westrail	receivals i	n Lower G	ireat Sout	hern			(Reg	ion 682)
Intrasystem										
680 Perth	12		1	_		10	29	_	54	106
681 South West		_	_	1	2	_	17	_		20
682 Lower Great Southern	19	_	_	291	97	_	34	_	7	448
683 Upper Great Southern	_			173	74	_	_	_	4	251
684 Midlands			1	_	_	_	_	_	_	1
Intersystem										
All Other Systems									1	1
Total	31	_	2	465	173	10	80	_	66	827

			00')	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		Westrail	receivals i	n Upper G	ireat Sout	thern			(Reg	ion 683)
Intrasystem										
680 Perth	39		_			2	113	_	25	179
681 South West	_	_	_		_	_	12		1	13
682 Lower Great Southern	5			· -						5
Total	44		_			2	125	_	26	197
	-	v	Vestrail rec	eivals in N	idlands				(Reg	ion 684)
Intrasystem										
680 Perth	125	_	_	_	_	12	183		72	392
681 South West	_		_		_	_	_	. —	· 1	1
683 Upper Great Southern	_	_	_	4	_		—	—	_	. 4
684 Midlands	_	_	96	24	4	_		—		124
Intersystem										
All Other Systems			_		_				1	1
Total	125	_	96	28	4	12	183		74	522
		Wes	strail receiv	als in Sou	th Easter	n			(Reg	ion 686)
Intrasystem										
680 Perth	77	1	_	_	_	16	25		65	184
681 South West	_	_	_	—		_	·	_	5	5
686 South Eastern (Westrail)	97		343	38	5	_		_	1	484
Intersystem										
All Other Systems		14	3			2			9	28
Total	174	15	346	38	5	18	25	_	80	701

			('00	0 tonnes)						- 1
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
	A	N Norther	n Region	receivals i	n South I	Eastern			(Reg	ion 686)
Intrasystem										
576 Port Augusta—Whyalla Intersystem			18	-		2	_	—	9	29
PTC of New South Wales	—	_	_	_	_		—		1	1
AN Central Region					<u> </u>			—	1	1
Total			18	_		2			11	31
		w	estrail red	eivals in (Central				(Reg	ion 687)
Intrasystem										
680 Perth	7	_	_	_	_	14	54		86	161
681 South West		_	—	_	—	_	1		7	8
684 Midlands		<u> </u>	_	56	_				_	56
687 Central	13	_	953	203	13	—	14		—	1196
Intersystem										
All Other Systems			_					—	4	4
Total	20		953	259	13	14	69	—	97	1425
		AN Tasm	anian Re	gion receiv	als in Ho	obart			(Reg	ion 790)
Intrasystem										
790 Hobart	2	_	_	_	_	_			_	2
791 Southern		_	_		_		_	_	157	157
792 Tamar	_	_	_	_	_	_	_	2	30	32
793 North Eastern	_	98	_	_	_		_	_	65	163
794 North Western	_	_	_		·	39	_	_	37	76
Unspecified							2		41	43
Total	2	98	_	_		39	2	2	330	473

			('00	0 tonnes)						
Origin	Bulk liquids	r. Coal	Other ninerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
		AN Tasmai	nian Regi	on receiva	als in Sou	thern			(Reg	ion 791)
Intrasystem Unspecified		_		_	_		_		1	. 1
Total	_			_	_	_			1	1
		AN Tasm	anian Re	gion recei	vals in Ta	imar			(Reg	ion 792)
Intrasystem 790 Hobart 791 Southern 792 Tamar 793 North Eastern 794 North Western Unspecified Total		 Tasmania	 n Begion				 16		11 91 140 318 312 49 921	11 91 140 318 318 65 943 ion 793)
·····		- domaina	Thegrou			Luotonn			(1109	
Intrasystem 792 Tamar 793 North Eastern 794 North Western Unspecified	1 — —	 			 	 1 	 42	 	1 3	2 45
Total	1	_	_		_	1	42		4	48

150

			00')	0 tonnes)						
Origin	Bulk liquids	Coal	Other minerals etc	Wheat	Other grains	Cement	Fertilisers	Steel	Other freight	Total freight
	AN	l Tasmar	nian Region	receivals	in North	Western			(Reg	ion 794)
Intrasystem										
790 Hobart	41				_	_	_		47	88
792 Tamar			10			_	<u> </u>		23	33
793 North Eastern		71	32						4	107
794 North Western	49	_				253			27	329
Unspecified				ندین دردندید در			49		57	106
Total	90	71	42			253	49		158	663
		ANI	Northern Re	egion rece	ivals in N	Т			(Reg	ion 899)
Intrasystem										
576 Port Augusta—Whyalla	(b)		(b)			(b)	(b)		(b)	19
Intersystem			()				. ,			
Victorian Railways	(b)		(b)		_	(b)	(b)		(b)	4
AN Central Region	(b)		(b)			(b)	(b)		(b)	79
Total	(b)		(b)		_	(b)	(b)		(b)	102

a. See definition in Chapter 1.b. Not available separately but included in total.