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TURKEY: COUNTRY PROGRAMMING
BACKGROUND PAPER

Report on Transport Sector

Report on a UNTAO Mission to Turkey
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by

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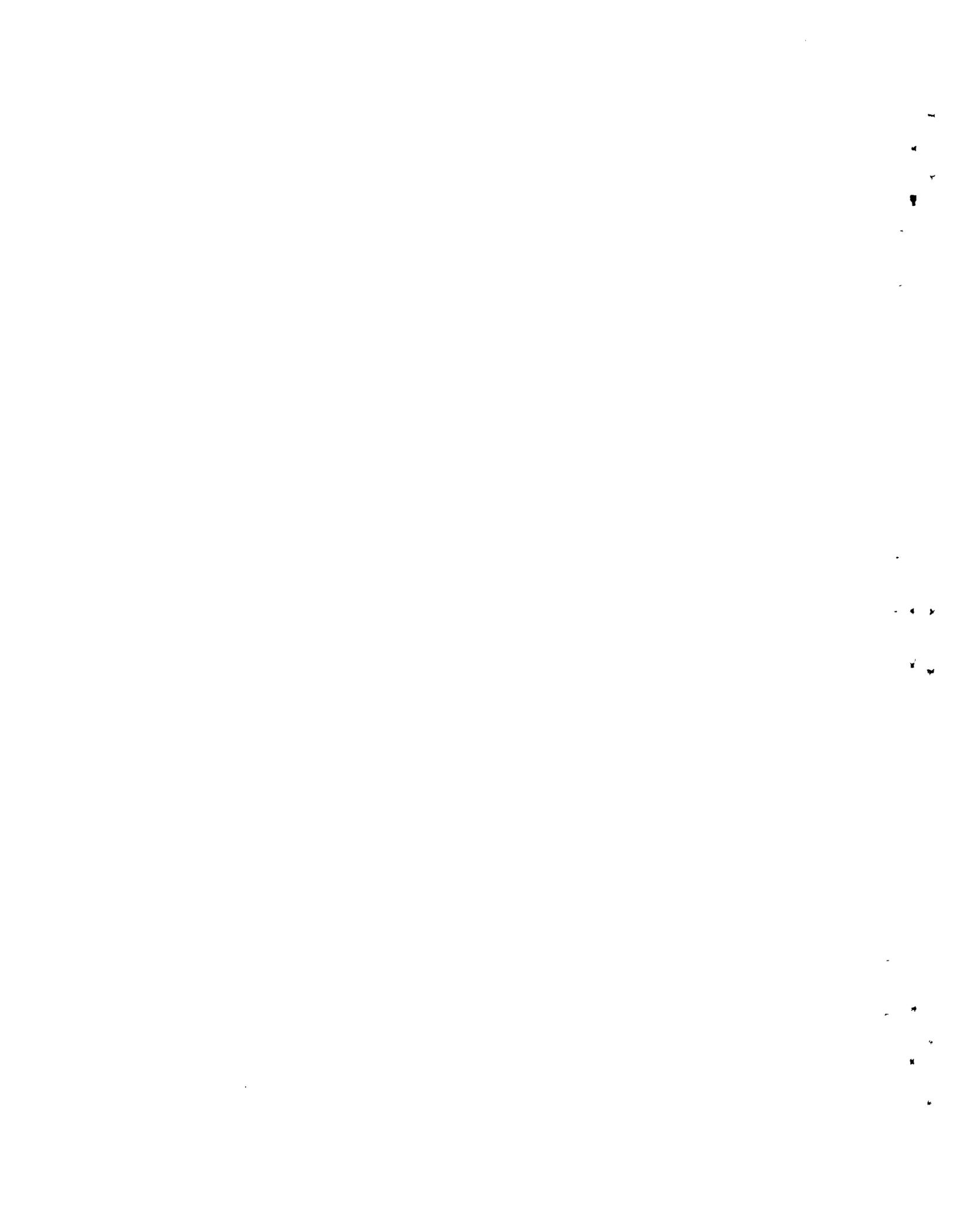
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A. TRANSPORT DEVELOPMENT SITUATION

As a frame of reference to introduce the subject of transport, a few basic geographic and economic data are outlined in the following paragraphs.

1. Elementary geographical notes

Turkey extends from the Thracian peninsula of South-eastern Europe through the Anatolian peninsula of Asia Minor; it is situated between 36° latitude north and 26° and 45° longitude east. The country has an area of about $780,600 \text{ km}^2$, is roughly rectangular in shape, the distances being about 1,600 km from east to west and 650 km from north to south.

The Thracian peninsula covers some $23,750 \text{ km}^2$, of wide, undulating topography. Anatolia on the other hand, with an area over $736,800 \text{ km}^2$, is mainly mountainous. Its north is bordered by massifs which raise from 1,000 m elevation in the west to over 3,900 m in the east, while in the south the long arc of the Taurus mountains has several peaks over 3,500 m high. These two high mountain ranges enclose the interior of Anatolia, high plateaus and steep broken lands, averaging over 800 m above sea level.

Except for its eastern and south-eastern limits, Turkey reaches to the seas: the Mediterranean on the south, the Aegean on the west, with the Marmara and Black Sea, which are linked by the Dardanelles and Bosphorus straits, washing its north-west and northern shores. The coastline of the country thus comes to 8,270 km, providing numerous locations for sea ports and harbours. However, Turkey's rivers, because of their irregular regime and deep valleys, are unsuitable as inland waterways.

Turkey's climate exhibits considerable regional variations. Continental dry summers and cold winters are encountered on the central plateau and are even more severe in the peripheral belts of mountains, while the coastlands have mild, temperate climate. Because

of its mountainous character, though otherwise influenced by the Mediterranean seaward orientation, Turkey has wide zonal and seasonal variations in both temperatures and rainfall.

Turkey has common borders with two European countries, Greece for about 160 km and Bulgaria, 190 km. In Asia it borders on U.S.S.R., along nearly 600 km long frontier, the remaining eastern land border being with Iran. In the south from the Mediterranean eastwards are the Middle-eastern frontiers with Lebanon, Syria and Iraq.

2. Basic economic data^{1/}

a) Population: distribution and growth

The population of Turkey, about 35.6 million in 1970, has had a rate of increase of 3 percent per annum since 1965, when its total was nearly 31.2 million, distributed in 67 provincial centres, numerous district centres and some 40 thousand villages. The two largest cities are Istanbul (2.25 million) and Ankara, the capital of the country (one million). Other main cities are Izmir, Adana, Eskishehir, Bursa, Samsun, Kayseri.

As may be expected from the physiography of the country, the population is not distributed evenly over the territory, while also the growth population differs among the districts. The highest densities are in western Turkey. Another trend is the migration to cities, brought about by the industrialization of the country. The urban population has grown from 5.4 million in 1950, to well over 11 million in 1967. This tendency is especially pronounced in the Istanbul-Ankara corridor.

^{1/} Data based on United Nations publications: Demographic Yearbook, 22nd issue; Statistical Yearbook 1970; Yearbook of National Accounts Statistics 1969, Vol.I; Yearbook in International Trade Statistics, 1969.

b) National income, gross domestic product

Planned development was introduced in Turkey in 1962, when the State Planning Organization (SPO) prepared the first of three five-year development plans. The second plan, 1968-1972, provides for a total growth of 40.3 percent of the national income.

The gross domestic product (at current factor cost) has risen from 55.2 thousand million Turkish Liras to 102.1 thousand million TL in 1968. Agriculture has been the main sector of the economy as it contributed about 33 percent to GDP. Next in importance are manufacturing and government activities which accounted in 1968, for about 16 and 10 percent respectively. Transport, storage and communication sector has increased from 5 percent in 1962, to over 8 percent in 1968.

c) Major products and their markets

In the agricultural sector, the main products are cereals, largely wheat, entirely for domestic consumption. In 1969, the cereals harvested were 17 million tons. Other main crops were 3.3 million tons of sugar beet, 1.9 million tons of potatoes, 0.6 million tons of pulses, 0.3 million tons of sunflower seeds.

Agricultural production for exports includes fresh and dry fruit; fresh fruit harvested in 1969 amounted to 5.1 million tons, while 190 thousand tons of fresh and dried fruit were exported in that year. Cotton production of 400 thousand tons resulted in 234 thousand tons exports; tobacco quantities produced and exported were 127 and 70 thousand tons respectively; hazelnuts harvested and exported, 170 and 81 thousand tons respectively (all data for 1969).

Principal minerals in Turkey are coal, lignite, iron ore, chrome, copper, manganese, lead, zinc. In 1969, the mineral production was mainly iron, 2.5 million tons, chrome, 665 thousand tons, zinc, 27.7 thousand tons, manganese, 25.2 thousand tons, copper 19.3 thousand tons. Two iron and steel plants are producing and a third one is planned.

Exported are mainly crude minerals, such as borates (293 thousand tons in 1969), chromium ores and concentrates (497 thousand tons in 1969).

The only bituminous coalfield is around Zonguldak on the Black Sea Coast. Output increased from 6 million tons in 1954 to 7.7 million tons in 1969, have not been sufficient for domestic demand. Extensive bituminous and lignite coalfields exist but have not been exploited for lack of transport facilities and power.

Oil reserves in Turkey are estimated at 45 thousand million tons. Oil production started in 1955. It increased from about 300 thousand tons at that time to 3.6 million tons in 1969. Three oil refineries are in operation (Batman, Izmir, Mersin) and a fourth (near Izmir) is under construction. Given steep increases in consumption, oil imports are necessary; they were 3.4 million tons in 1969.

Turkey's international trade in commodities is orientated by the development plans so as to rectify the adverse trade balances: speculative imports are discouraged, while exports are facilitated by establishment of export-orientated industries, introduction of measures to decrease production costs, improve quality, provide market research.

d) Foreign trade, distribution of trade by means of transport

In 1969, the trade of Turkey remitted in 6,785 million TL imports and 4,831 million TL exports. Machinery and manufactured goods accounted for over half of the total imports (3,900 million TL). Exports consist mainly of food (fruit etc.) 2,000 million TL and crude materials, 1,560 million TL.

The principal trading partners of Turkey (data for 1969) are Federal Republic of Germany, which was the country of origin for 1,258 million TL of imports and the destination of 1,012 million TL exports, and the United States as the origin of 1,153 million TL imports and destination of 539 million TL exports. Other main trade flows include imports from the United Kingdom, 829 million TL; Italy, 668 million TL. Exports are more diversified as there are some five countries which provide markets for Turkish products

in the range of 400 to 250 million TL annually: Italy, United Kingdom, U.S.S.R., France and Switzerland.

Sea transport is the main mode for the international trade of Turkey. Maritime ports loaded 2.6 million tons in 1968, 3.4 million tons in 1969 and 3.5 million tons in 1970, while the tonnages of cargo unloaded were 7.1 million in 1968, 7.7 million in 1969 and 8.3 million tons in 1970. Data on cargoes loaded and unloaded by railways, road transport and by aircraft for exports and imports respectively are not available from published sources, but the relative importance of both road and air transports, is reported as markedly on the increase.

3. Transport networks and services

The contribution of the transport sector to the gross domestic product has increased from five to nearly seven percent over the recent years (1965 to 1969).

The roles of the different modes of transport in the total transportation movement of passengers and goods have evolved in such a way that in 1969, 89 percent of passenger kilometres outside urban areas were carried by road, 10 percent by rail and less than 1 percent by air. In the same year, in goods traffic, nearly 74 percent ton km were contributed by road, and 26 percent by rail (see Tables 1 and 2).

Table 1

Turkey: Passenger Transport by Mode, 1950 & 1966-1970
(volume in million passenger km; share in percent)

Year	Domestic Air		Main Line Rail. ^{2/}		Bus ^{3/}		Car		Coastal Shipping		Total	
	Vol	Share	Vol	Share	Vol	Share	Vol	Share	Vol	Share	Vol	Share
1950	^{4/} -		2,182	42.0	2,597	50.0 ^{5/}	..	..	389	8.0	5,168	100
1966	177	0.7	3,492	13.8	13,582	53.6	7,878	31.1	211	0.8	25,340	100
1967	196	0.7	3,548	11.8	17,072	56.8	9,048	30.1	171	0.6	30,035	100
1968	232	0.6	3,643	9.8	20,815	56.1	12,302	33.1	157	0.4	37,129	100
1969	261	0.7	3,640	10.1	20,503	57.1	11,479	32.0	150	0.4	35,883	100
1970	308	..	3,444	..	..	..	..	..	..	..	..	..

^{2/} Suburban rail passenger - traffic has been excluded to allow a more meaningful comparison with road figures, which do not include local journeys in city streets.

^{3/} Passenger traffic by truck has been excluded.

^{4/} In 1953 (first year of operation), 62 million passenger km.

^{5/} Passenger data not available. Total bus and car traffic.

Source: Annual reports of THY, TCDD and the General Directorate of Highways.

Table 2

Turkey: Freight Transport by Mode, 1950 & 1966-1970
(Quantities in million ton km; shares in percent)

Year	Domestic		Rail ^{6/}		Road		Coastal		Total		
	Air ^{6/}	Vol	Share	Vol	Share	Vol	Share	Vol	Share	Vol	Share
1950	^{7/}	-	3,078	77.6	957	22.4	262	6.0	3,078	100	
1966	18	0.1	5,494	36.4	9,504	62.9	97	0.6	15,113	100	
1967	17	0.1	5,062	31.2	11,055	68.2	78	0.5	16,212	100	
1968	19	0.1	5,246	27.2	13,998	72.4	58	0.3	19,321	100	
1969	21	0.1	5,681	26.2	16,400	73.7	61	0.3	22,163	100	
1970	..	..	5,629	..	..	..	..	..	..	..	..

^{6/} Revenue ton - kilometres. Data not available.

^{7/} In 1953 (first year of operation), 6 million km.

Source: Annual reports of THY, TCDD and the General Directorate of Highways.

a) Roads and motor transport

Systematic and extensive road development dates from early 1950's^{8/}. In 1947, steps were taken to outline the system of Turkish national highways, set up the necessary organization and designate the revenue sources. In 1950, the General Directorate of Highways (TCK) began to work as an autonomous organization of the Ministry of Public Works on the planning and construction of the national highways. The provincial network is mainly the responsibility of the Ministry of Reconstruction and Redevelopment (YSE) under its rural development programme. On occasions the General Directorate of Highways undertakes road building and improvements on a sub-contract basis for YSE. Since 1950, the total length of the surfaced national, provincial and village roads has increased from about 25,000 kilometres to about 95,000 km while the total number of motor vehicles in Turkey has expanded from 36,000 to about 385,000, including motorcycles (see Table 3).

^{8/} For detailed survey see Highways and Highway Transportation in Turkey Ministry of Public Works, T.C.K. Division of Planning, Plan: Publication No. 1971/8. Ankara 1971.

The budget estimates of the General Directorate of Highways have increased from 69 million TL in 1950, to 2,200 million TL in 1970, and 2,300 million TL in 1971, or from about 3.6 percent of the national budget in 1950 to about 7.3 in 1971.^{9/} Budget expenditures on highways are covered in part from customs duties and production taxes on fuel (about 40 percent of the total) and the rest from the general budget allocation.

Disbursements of the TCK, which in 1950 started with 62 million TL, surpassed the 500 million TL level in 1959 and 1,000 million TL mark in 1969.^{10/} The overall total for the years 1950 to 1971, amounts to a sum of 20,110 million TL (at current prices).

The highway infrastructure by categories, type of construction and physical condition in 1971 reached the following extent (in kilometres)^{11/}

Table 3

Characteristics	Roads			Total
	National Highways	Provincial Highways	Village Roads	
<u>All weather (motorable)</u>	<u>31,500</u>	<u>15,000</u>	<u>56,000</u>	<u>102,500</u>
high type pavement	2,500	-	-	2,500
bituminous surface treated	15,000	2,000	(17)	17,000
macadam or gravel surfaced	14,000	13,000	56,000	83,000
<u>Dry-weather (motorable)</u>	<u>2,300</u>	<u>7,000</u>	<u>21,000</u>	<u>30,300</u>
graded earth	1,800	6,000	21,000	28,800
other earth	500	1,000	-	1,500
<u>Low standard (non-motorable)</u>	<u>1,200</u>	<u>2,000</u>	<u>85,000</u>	<u>88,200</u>
primitive construction	1,200	2,000	85,000	88,200
<u>All roads</u>	<u>35,000</u>	<u>24,000</u>	<u>162,000</u>	<u>221,000</u>

9/ During 1955-1960, this averaged 11.6 percent.

10/ Source: Table 46, Annual Statistics of Turkish Highways:1969. Ministry of Public Works, TCK. Ankara, March 1, 1971.

11/ Source: Op.cit. in note 8, pages 13 and 14.

Turkey's highway network forms part of the Main International Traffic Arteries.^{12/} Two frontier junctions at Kapikule and Kirklareli respectively lead to Bulgaria; at Ipsala, is a link of the international highway of Greece and Turkey. International road connections with Iran are east of Dogubeyazit and at Esendere.

The growth of motor vehicle fleet (see Table 3) to 385 thousand motor vehicle registration (which still leaves 93 persons per motor vehicle), is rather recent. While a 1968 estimate indicated the average age of the fleet as 8 years for cars and trucks and 7 years for buses, a recent study^{13/} shows average ages as 4 years for trucks, 3.15 years for buses and 5 years for cars. The expansion of the fleet is due to a relaxation of restrictions on importation and the rapid expansion of the vehicle assembly industry. In 1970, it assembled 11 thousand trucks, one thousand buses and 6 thousand cars.

As for services, there is no restriction on entry into road transport for reward or hire apart from a driving text appropriate to the class of vehicle to be driven and an initial vehicle inspection.^{14/} In addition, there are three main areas in which the operation of road transport is subject to control: speed limits are prescribed according to the vehicle category (e.g. for buses, max. 80 km/h, trucks, max. 70 km/h); driving hours of professional drivers are regulated (max. 9 hours/day of which max. 5 hours may be taken without a break); maximum dimensions, axle loads and capacity of vehicles are set by law.^{15/}

^{12/} This is a project of the UN Economic Commission for Europe, under which countries cooperate in developing designated routes to agreed technical characteristics.

^{13/} Analysis of Ankara-Istanbul road traffic by Davis & Robson, Transport Accountants and Consultants, Croydon.

^{14/} Commercial vehicles in use should be inspected every four months (private vehicles every six months). Enforcement of these regulations depends on spot checks by the traffic police, but the numbers of defaulters is thought to be high particularly as the spot fines levied are low.

^{15/} This results in an effective limitation on the weight of the load carried of around 8 tons and 14 tons respectively. A survey revealed that in 1969, on average, each loaded truck on the Ankara-Istanbul road was overloaded by approximately 30 percent.

There being practically^{16/} no other requirements for road transport operation; the result is that most of commercial transports in Turkey are operated with very small fleets. The majority of operation whether it be taxi, route-taxi (dolmus) inter-urban bus or truck, is by single vehicle businesses. These may be either owner-driver operated or a driver may be employed. However, bus services of large towns are generally operated by the municipality, although they are subject to competition from route-taxis and sometimes from privately owned buses.

In passenger transports, owners' associations normally provide an organizational framework in which the small owner can operate; the association will take a percentage of the receipts (a common figure mentioned is 15 percent) before passing them on to the owner.

In freight transports, brokers or agents normally act as middle men, obtaining business for the small owner. The normal percentage obtained by these brokers is in the order of 20 percent for full loads and perhaps double this for part loads. Sometimes, as may happen with the owners' associations mentioned above, brokers or agents may own one or more vehicles themselves.

The consequence of the large number of small operators is that competition is very severe. Rates, and fares are very low, driving and maintenance standards are inadequate and compliance with traffic rules and regulations unsatisfactory.

In recent years larger companies have been formed, which own and maintain their own vehicles and have their own marketing organization. A premium price is paid for their higher quality services. Examples of such companies are Varan, which operates passenger services, and Tuzcuoglu and Egeman which operate road haulage services, with the latter active in international goods transport business to Europe.

^{16/} In certain cities including Ankara and Istanbul plate restrictions are imposed by the traffic police on entry into the taxi trade.

The freight moved by road is mainly agricultural products (about one third of total ton km goods traffic) manufactures (another third of the total) and minerals (about 20 percent of the total). The Ministry of Communications is empowered to fix minimum fares per passenger km and rates per ton km according to surface or grade of the road and type of vehicle. In 1970, the average rate for grain was 0.125 TL per ton km, and for bus travel 0.02 TL per passenger km.

b) Railway system

The railway network in Turkey totals 7,950 km of lines.^{17/} Its present configuration has been substantially achieved as a result of a rapid and relatively extensive construction effort between the two World Wars. Subsequently, it was intended to build another 2,200 km of lines between 1948 and 1965, but this plan was left large in abeyance for only about 200 km of new line were added to the network since 1959. This included relocated link Istanbul-Greek frontier, which provides the physical link with the European railway systems, and a new line (with a ferry connection across lake Van) in eastern Turkey to connect with the Iranian lines (the CENTO railway). Other international railway junctions connect with U.S.S.R., Syria and Iraq.

For reasons of early private ownership, then for those of topography and economy, the network has structural deficiencies, which it may take still a long time to eliminate. Some important centres lack a railway link, for example, Bursa, the fifth largest city with 276 thousand inhabitants and growing industries. Other drawback is that railway line distances between many centres run much larger than the more recently constructed highways, as is the case in particular of the trunk line, Istanbul-Ankara. Not only are the railways mostly single line, they have moreover sharp curves, steep gradients and rely on simple train movement protective installations and

^{17/} Standard gauge. Including sidings, marshalling yard and junction lines, total length of railways is 9,850 km. standard gauge and 35 km narrow gauge.

and techniques unsuitable for modern operating requirements.^{18/}

The services are operated by the Turkish Republic Railways Exploitation, (T.C.D.D.), since 1953 an autonomous State Economic Enterprise (see Table 4). The T.C.D.D. is subject to supervision and control of the Ministry of Communications in budgetary matters, setting tariffs and main operating criteria. New infrastructure (lines, bridges, tunnels, electrification works, etc.) is not the responsibility of T.C.D.D. That is designed and constructed by the Ministry of Public Works (Railroads, Harbours and Airports Construction Department), and only after 12 months maintenance of these works passes to the T.C.D.D.

Table 4
Turkey: Main T.C.D.D. descriptive data, 1966-1970

Essential Data	Y E A R		
	1966	1968	1970
Length of line operated (km)	7,980	7,980	7,985
Of the total line, with electric-traction (km)	28	28	72
Electric locomotives			33
Diesel locomotives			180
Steam locomotives			849
Passenger coaches	1,193	1,260	1,220
Goods wagons	16,231	16,779 ^{19/}	15,833
Goods traffic (million tons)	15.8	15.0	13.8
Passenger traffic (million persons)	85.9	98.1	104.0
Train traffic (million train km)	38.4	38.7	40.2
Personnel employed (numbers)	62,978	66,894	65,874

Source: International Railways Union. Berne 1972.

^{18/} Electrical signalization (CTC) so far installed on Haydarpasa-Ankara line, is to be extended.

^{19/} In 1968, 2215 wagons manufactured in railway workshops and 470 wagons imported under US/AID assistance.

Steam locomotives form the bulk of the present traction equipment but it is intended that eventually all the steam locomotives will be replaced by diesels except of course on electrified lines. A programme is under way, designed to assemble diesel locomotives in Turkey with an increasing proportion of locally manufactured components. Electrification is at present confined to the lines crossing the Bosphorus and forming the Istanbul zone services. The line between Gebze and Arifye is currently being electrified and doubled. The Ankara suburban area lines will be electrified in 1972. The 25 KV system has been adopted on the T.C.D.D.

Express passenger services, on journeys which can be accomplished by day, are generally operated by diesel auto-trains. An exception is the Bosphorus Express, a locomotive-hauled train between Ankara and Istanbul. Longer express services are provided by locomotive hauled trains with dining and sleeping car facilities. The T.C.D.D. is the principal carrier of bulk freight over long distances though otherwise road transport satisfies the major part of goods transport requirements, as in passenger transport.

Compared with road sector expansion, noted in the preceeding section, railway traffic and services have been slow to grow (see Tables 1 and 2). Taking 1950 as the base year, the influx of new traffic on the road and by air over the twenty-year period has been much more dynamic than on the railways as the following tabulation will show (rail traffic in 1950 taken as basis, expressed by an index number 100):

Traffic	Year	Rail	Road	Coastal Shipping	Air
passengers	1950	100	119	16	3
	1969	167	1,467	7	12
goods	1950	100	31	9	-
	1969	180	529	2	1

While during the period from 1950 to 1969, passenger traffic on the railways increased by 67 percent; on the roads it grew nearly twelve times. For goods traffic, the railway gain was 80 percent then, (in 1970 it increased to 90 percent) but road freight increased almost 17 times.

In terms of ton kilometres, the main commodities carried by railways are ores, lignite, coal, agricultural produce. T.C.D.D. estimates its gross costs at 0.075 TL per ton km and 0.097 per passenger km. In 1968, T.C.D.D. calculated revenues amounted to rates of only 0.04 TL per ton km and 0.037 TL per passenger km.

c) Sea ports and shipping

The major sea ports are operated by the Maritime Bank (D.B.): Istanbul, Izmir, Trabzou and Giresun are the responsibility of the Maritime Bank. Haydarpaşa, Derince, Samsun, Mersin and Iskenderum being rail served, are the responsibility of the T.C.D.D. Other specialised ports are operated by the appropriate authority, for example, Zonguldak port by the Turkish Coal Company (T.K.I) or port of Ereğli by Erdemir the Iron and Steel Corporation. D.B., T.C.D.D. and T.K.I. have freedom to set their own port tariff. In practice D.B. and T.C.D.D. use the same tariffs by agreement. There is no navigable inland waterway in Turkey but coastal shipping is important.

The Maritime Bank (D.B.) has a monopoly of coastal passenger services (by ships over 18 tons). Its cargo services operate competition with the private sector, the composition of the cargo fleet being as follows (information for 1964, ships of over 100 tons):

	No.of ships	d.w.t.	Average tons	Fleet Share	
				% of ships	% of tonnage
Maritime Bank (D.B.)	100	134,377	300	34	21
Cargo Lines (D.B. majority holding)	31	183,945	6,000	10	28
Private Shipowners	167	329,849	2,000	56	51

The average size of ships is small and many of the ships are old.

Coastal shipping is important for the country, but its share also has declined in the last twenty years particularly because of competition from road transport. To play a more effective part, not only the fleet should be modernized but also the port infrastructure would require considerable investment, neither of which so far has been forthcoming. Coastal shipping transports mainly coal, minerals, iron and steel products.

d) Airports and air services

There are 18 aerodromes in Turkey, of which two are international (serving Ankara and Istanbul respectively), two can be used by international non-scheduled services and the remaining ones are open for domestic flights.

Air services have to be approved by the Ministry of Communications. There is only one operator at the present time, the Turkish Airlines (T.H.Y.), which has the status of a State Economic Enterprise (actually it is a joint stock company with 94 percent of the shares state owned).

Air transport is being developed as a matter of Government policy though in domestic services it can provide only a small share of the passenger transport output for the foreseeable future. In 1968, 95 percent of the T.H.Y. domestic revenue was obtained from passenger traffic, yet for low fares and small total passenger movement, domestic services lost TL 15.3 million.

Airports are operated by the General Directorate of State Airports (D.H.M.I.). Their construction is the responsibility of the Railroads, Harbours and Airports Construction Department of the Ministry of Public Works.

B. GOVERNMENT ACTIVITIES IN THE TRANSPORT SECTOR

1. Transport policy

While Turkey introduced planned development in 1962 through the adoption of the first Five-Year Plan, the Government has not established transport sector planning in the strict sense of the term, by public authorities. The typical initial action in such case would be the execution of a basic survey resulting in a long term programme of investments, accompanied by policies, operational and organizational measures, with the overall aim for the transport modes combined to carry efficiently the country's traffic.

The actual goals and objectives of Turkey in the transport sector are those of the economy as a whole. In a market economy, transport improvements are planned and installed by the public sector, in the expectation that they will contribute significantly to stimulating economic development. In fact, the Turkish Republic has had a consistent policy of entrusting the State with a major responsibility for developing the transport sector.

The Governments, in implementing such trust, as a rule endeavoured to apply solutions recognized as modern at the time; moreover, they did not hesitate to import the required techniques and obtain foreign expertise. This was the case in the earlier periods when the forming of the railways were being built or the shipping networks and services formed. More recently, this has occurred in building up the road network and establishing air transport infrastructure and services. At the present, with minor exceptions, the State is responsible for the capital fixed investments, providing the infrastructure of the modes of transport. State enterprises have been established to operate rail, sea and air services, while motor transport services are provided by the private sector.

With the rapid expansion of the road network and improvements to the main arteries, road transports gained several advantages while at the same time the monopolistic position of the railways has been eroded. This has been of course a profound change, so that policy steps have been sought to modify the laws and regulations on tariffs and rates of the railway services, and substitute them by new legislation neutral among the various modes, with the economic proviso that fares, rates and charges should compensate the costs according to the mode used.

In particular, new laws on road and rail competition and on transport policy in general have been studied by the Government and Parliament since about 1966. In a recent official communication to UNDP^{20/} the Government made an observation to the effect that an unambiguous and consistent transport policy would be formulated, ensuring rational allocation of resources in the sector.

2. The 1968-1972 Plan objectives and targets

The recent trend of the country's transport policies is reflected in the 1968-1972 Second Five-Year Development Plan. It specifies the following main objectives^{21/} for the continued expansion of the sector:

- minimize costs and ensure stability in meeting demand
- secure balanced development
- lead the different modes to compete under similar conditions
- obtain contribution from users for depreciation, maintenance and repair of the infrastructure

^{20/} Memorandum of understanding, appended to the Government's request for assistance on Transport Co-ordination (phase II project; see C.2 below).

^{21/} Republic of Turkey. Prime Ministry. State Planning Organization. Second Five-Year Development Plan. English version SOP 752 Ankara 1969, Page 606.

- modernize the administrative, organizational, planning, and research action
- define clearly responsibilities of the various agencies involved in transport matters

The estimated demand on services was set at over 9 percent per annum for road transport and over 7 percent per annum on the railways; it has been taken as requiring in the first place, an improved infrastructure and secondly, a substantial increase in the carrying capacity of the different modes. During the Plan, the total investments in the sector are proposed to be as follows (in TL million):^{22/}

Mode	Amount
<u>All modes</u>	<u>16,740</u>
highways	12,170
railways	3,150
sea	900
air	520

The investments, mainly on renewal and upgrading of the networks, are nearly double of those in the First Plan. The road system is to be improved by completing gaps on the main routes, improving the quality of provincial roads and emphasising the construction of village-to-market roads, for a total of 14,400 km main (high design standard) roads and 45,000 km group village roads.

On the railways priority has been assigned to the completion of CENTO railway link between Turkey and Iran, to completing the double track of line approaching Istanbul and Ankara. Moreover, the Plan indicated the necessity to concentrate on the renewal of over 1,000 km of lines in the various sections of the network where traffic density calls for it. The targets for building up carrying capacity are the domestic assembly of 152 diesel locomotives and manufacture of 448

passenger coaches and 3,620 goods wagons within the Plan period.

3. Implementation of the Plan

The overall economic growth of Turkey during the Second Plan has been accompanied by numerous problems but in general, the assessments are favourable^{23/}. In the transport sector, it would seem that the Plan has fared less well. Capital investments on roads and railways, the main sub-sectors, remained substantially below the figures of the Plan, since its early years. This is reflected in the following data (TL millions):^{24/}

Mode	1968		1969	
	Plan	performance	Plan	performance
Roads	2070	1091	2230	1157
Railways	485	161.6	600	...

This may have been due to a lack of external financing in the case of the roads, while for the railways it was a lack of proper rehabilitation plan and delays in local manufacture of rails and rolling stock, reflecting the Government's desire to manufacture in the country as much as possible of railway equipment parts and rails. It came as a part of a deliberate shift of the respective weights of irrigation and infrastructure projects on the one hand and of the industrial and energy sector projects on the other, in favour of the latter.

^{23/} See UNDP Annual Report for 1971 for the Inter-Agency Consultative Board, March 1972, and Turkey's Annual Surveys by OECD, Paris.

^{24/} Sources: Plan, Table 379, Railways and Highways Directorate's annual reports.

For the railways this resulted in a sizeable slowing down of the planned new line construction and of renewals of rail on those sectors of lines where the traffic requires it, and in some delays in the acquisition of new locomotives and rolling stock. However, the investments reached levels well above the First Plan, which allocated the sum of 540 million TL for railway investment projects (expended were 443.8 million TL, 82 percent of allocations). The Second Plan shows 3,150 million million TL earmarked for the sub-sector. These railway investments were intended about 700 million TL for new construction by the Ministry of Public Works and 2,450 million TL on projects for which the T.C.D.D. is responsible. Compared with these Plan totals the actual expenditures up to 1971 were only TL 780 million. Added to this the allocations for 1972, amounting to TL 172.5 million the overall capital programme amounts to 952.5 million TL.

The reduction of capital expenditure in road sub-sector has been less severe, from the originally planned 12,170 million TL to reportedly less than 9,000 million TL. It is interesting to note that the high annual rates of motor traffic growth anticipated by the Plan have been attained in spite of the investments reduction. This could mean that originally, in relation to the planned contribution of the sub-sector to national product investment projects and programmes may have been over-dimensioned and possibly the investments of the private sector in vehicles have not been fully taken account of. The other sub-sectors' results of their respective contributions to the economy are less well discernible. Under the Government's pursuit of the Plan objectives, a common aspect has been the concern for maintaining the various forms of subsidies and avoid measures which could have the effect of raising rates and charges.

C. UNDP - ASSISTED ACTIVITIES

1. General Comments

The co-operation of the United Nations Development Programme with the Government extended to administrative and regulatory matters of road traffic and motor transport services, from airline maintenance programming and air transport planning, to transport sector 10-year investment programme, transport co-ordination, railway transport rationalization and management re-organization. The road transport projects preceded the Second Plan^{25/} the air transport questions were set up as a small-scale project, while the UNDP assistance has been an organic part of the Second Plan. As such, it was cast into one comprehensive project, Transport Co-ordination and Railway Survey - TUR 31.

The objectives of the project TUR 31 are to help re-organize the transport administration system, reform transport policies, propose ways and means of improving the administration of the Turkish State Railways (TCDD), and draw up a ten-year railway investment programme.

The studies on co-ordination of transport, one of the main areas of concentration of the projects were directed to the already mentioned need to find solution to a transport problem recognized as possibly the chief obstacle to the success of the 1968-1972 Plan objectives in the sector. Still during the course of the preparations for the project early in 1968 the Government indicated intentions to present a draft law to Parliament, which would rationalize the allocation of resources for the sector, and channel the traffic demand to the mode best suitable to its particular requirements, without resort to any elaborate control system of competition.

It would seem that at the time, the authorities recognized the urgency of action on this particular problem from the concern for arriving at a clear road-rail policy, in order to arrest railway deficits. In the discussion of

^{25/} Consolidated report in UNDP Library UNTA No. 54, Highway Transport Administration in Turkey, United Nations TAO/TUR/32. September 1965.

the project, traced to these were competition from road motor transport services and lack of funds to invest in a modernization of the track and replacing obsolete rolling stock and locomotives, but the inefficient and unwieldy railway organization also contributed to this situation.

It was the World Bank which acted as the Government's adviser in the preparation of the project, following earlier consultations on a possible assistance to the railways with the financing of the external component of T.C.D.D. investment programme, under the Second Plan. The Bank then became the Participating and Executing Agency for the project, which commenced in April 1969, sub-contracted to a firm of consulting engineers, Italconsult. The sub-contract was completed in June 1971, which the project as a whole will terminate at the end of 1973, to allow for the conclusion of a fellowship programme.

On the completion of the consultants' part in the project, the Government and the enterprises, in particular the railways, began to take action on the recommendations of the study. On the one hand, T.C.D.D. geared for a reorganization, but especially the creation of a co-ordination agency was agreed to in principle, located within the SPO. However, for either kind of action in these fields, the preparatory stages take long to pass through and most of the reform measures even longer to implement. It is, therefore, quite understandable that recently, the Government requested further assistance on follow-up projects, that have been suggested or anticipated, by the consultants for the project TUR 31.

2. Transport co-ordination

In regard to transport co-ordination, the Government's request to UNDP for expert assistance has been approved in January 1972^{26/}. It has as its objectives to help the implementation of recommendations on:

- management information system, transportation demand forecasting system, costs and tariff analyses system, transportation expenditures and revenues monitoring system, transportation investment analysis system.

This is in general the substance of a recommended follow-up on the study TUR 31 formulated by the consultants for the operational phase of a transport co-ordination agency. While the consultants decided on an evolutionary approach, they nevertheless concluded that the expatriate expertise for the tasks of the agency stated above, could be usefully provided only after the agency has passed through the experimental or formative stage with a small staff, to an interim stage with a relatively strong professional staff, and finally, to the operational stage, with the full personnel complement.

The operational stage would be reached when Parliament passed the corresponding legislation, in particular:

- a) a law containing transport policy statement and providing for the establishment of the agency, and
- b) a law on the reorganization of the Ministry of Communications, (with the corresponding changes in other Ministries), the Minister becoming the Transport Coordinator;

Neither the process of the physical establishment of the agency nor the legal preconditions have been accomplished.

The formative stage of the agency, termed transport co-ordination nucleus by the consultants, was sought to be reached by the creation of the Transport Co-ordination Project Centre (TCPC) which was set up in Spring 1970 and by the simultaneous designation of the Under-Secretary, State Planning Organization (SPO) as the Interim Transport Coordinator. The following were personnel requirements for the initial, study, stages:

^{26/} In UNDP Ankara file Phase II Transport Co-ordination Project

- a) staff required to start function in April 1970; five professionals (transport economist; industrial engineer; management information economist; management information statistician; transport system organization expert)
- b) additional positions to be filled by June 1970: three professionals (senior economist; second transport economist; administrative assistant), six research assistants, seven office personnel.

During the time the agency was to carry on as an interim organization it was to expand from the above total of 24 personnel to a staff of 49 professionals, research and office assistants and other workers. The vacancies to be filled were the director and the deputy director; three junior economists; civil engineer; economist for urban transport; seven research assistants; office staff.

The proposed manning schedule has not been adhered to. From April 1971 until March 1972, the TCPC staff had 12-member full-time staff and three senior advisers on a part-time basis from other Ministries. After a two-month suspension of activities, the TCPC has been reconstituted in May 1972. It has three professionals, two research assistants, one secretary; the senior transport economist of the economic division of SPO has been designated as officer in charge of the Centre.

The SPO-sponsored TCPC carried out a considerable amount of studies, though it did not engage in drafting the laws and decrees on the establishment and organization of the agency or on the re-organization of either the Ministry of Communications or the T.C.D.D. It convened a series of meetings of inter-ministerial technical committees when first established, but no co-ordination meetings have been held in 1972.

As for legislative action, it appears that the Ministry of Communications has taken a new initiative. In particular, it prepared a new organic law of the Ministry, which includes provisions on transport co-ordination and even on the setting up of provincial transport directorates. The Government submitted the draft to the Parliament on 29 June 1971.

This law is to be complemented by legislation on the different modal matters:

- a) operation of state ports, which under the draft submitted to the Prime Minister by the Ministry of 29 May 1971, would consolidate in one agency the operation of ports now operated either by the T.C.D.D, the Maritime Bank or by local authorities;
- b) establishment of state shipbuilding organization, which would take over the shipbuilding yards of the Maritime Bank, under a draft submitted to the Prime Minister on 3 June 1971;
- c) merger of shipping lines of the Turkish cargo line and those of the Maritime Bank, under a draft law recently completed by the Ministry;
- d) new organic law of the T.C.D.D. to replace the existing law No. 686; this draft was sent to Parliament on 27 April 1971, where the Communications committee completed its action thereon;
- e) regulation of railways in public interest, to replace present law dating from 19th century, by a draft law intended for submission to the Cabinet by the Ministry before Summer 1972.

There are, furthermore, new regulations of road traffic and road transportation in process of preparation, by an inter-ministerial committee, based on reports prepared by the Directorate-General of Highways. In that respect, consideration has been given, to the introduction of some licensing system for road transport, or alternatively to strict enforcement limitations on commercial vehicle regulation of loads, etc.

The present situation is marked by the reduction of the co-ordination centre staff and by the drafting of a series of laws dealing with transport through a process which may not have taken adequate account of the UNDP-assisted study. It could lead to a substantial policy change in the sense that the principles of co-ordination propounded by the project TUR 31 may have been modified and some even disregarded. This might be an unintentional development, rather than deliberate decisions. A concern for a possibility of such turn of events is legitimate, bearing in mind that the transport policy reform, the institution building, the instruments of pricing and financial targets, proposed under the project are very advanced ones, involving difficult political decisions. They are more complex than the

so far prevalent (but on the way out) economic regulation of the transport sector through official interventions or restrictions, such as setting of approved tariffs, minimum or maximum rates, or controlling competition through approvals of access to the industry.

Apparently, there is no way for UNDP to receive copy of the draft laws sent to the Parliament. Having copies of at least the draft legislation on the Ministry of Communications and the T.C.D.D., respectively, would enable the UNDP and the World Bank to have some idea of the support that will be forthcoming from the Government to the co-ordination agency, even though there would be no indication, when the action of the Parliament should be completed.

In the circumstances, it only may be speculated that the obstacles and difficulties will be eventually overcome, and that the project will continue at a later date. The UNDP has here the difficult task of holding the project un-operational until the legislation is passed on the organization of the agency and of the Ministry of Communications, and until the agency personnel is again built up at least to the strength it had during the formative stage.

3. The railway modernization problem

Recently, the Government submitted an application for technical assistance in special railway (TCDD) studies.^{27/} It can be considered as a continuation and an extension of that part of the Transport Co-ordination and Railway Study TUR 31 which dealt with the railway investment programme and T.C.D.D. management. In that regard, let it be recalled, the railways are one of the State Economic Enterprises which have been as a group for many years a major problem, requiring a determined action.

^{27/} See UNDP Library reference UNTA No. 71, dated September 1971.

As regards these Enterprises, the Second Plan proposed to raise substantially their low levels of efficiency and profitability, objectives which do not seem to have been achieved. The contribution of the State Enterprises to their net investments in capital has been negative for several years, which means that the Government must find additional revenue from taxation and other sources to finance deficits of some of the enterprises.

The need to improve the profitability, reduce losses, avoid misal location of resources, has been especially difficult to realize on the railways. The losses of T.C.D.D. have been mounting since 1959. The deficits in the recent years reached these proportions (in million TL):^{28/}

Year	Deficit
1968	480
1969	562.4
1970	991
1971	788

The recommendations made by the project TUR 31 and submitted to the Government do not deal directly with the deficit situation but outline the principles of a major reorganization of T.C.D.D. including the raising of the technical level of its management.

i. T.C.D.D. Organization

The request for further assistance can be considered as an extension of, or supplementary co-operation resulting from the completion by the consultants of the railways studies under the project TUR 31. Such further assistance is indeed envisaged by them, for they recommend undertaking additional, more detailed work which would permit decisions to be made on:

^{28/} Public enterprises in the red = TL 267 m.
Daily News, page 3, May 24, 1972.

- a simpler T.C.D.D. organization at Headquarters and in the regions 29/ when the transport co-ordination agency becomes operational and the Ministry of Communications is reorganised
- establishment of statistical and cost accounting programmes 30/
- re-organizing rolling stock and locomotive workshops 31/
- large-scale introduction of safety and signalling systems, following the related feasibility analyses 32/
- sections of lines which should be modernized under an approved investment programme 33/
- closing of uneconomic lines, stations and services, with the creation of substitute services 34/

In formulating these recommendations, the consultants explain that these management studies can usefully proceed once the pre-requisite has been satisfied, that is, the legal structure of the T.C.D.D. has been modified. 35/

Apparently experts of the World Bank appraised the results of Italconsult Railway Study and discussed with Turkish Government Officials the progress and problems in implementing its recommendations up to late 1971. They concluded that several of the consultants' recommended studies could be done while the modification of T.C.D.D. legal structure is being prepared, and that they would constitute a concluding phase of the project TUR 31, to be financed by UNDP.

29/ Railroad Studies. Final Report. UNDP Library UNTA No.64, pages 12 (third paragraph), 25-28, 163-165, 167.

30/ Op.cit. pp. 94, 166 (paragraphs 9,1,4), 168.

31/ Op.cit. pp. 25, 53-58, 168.

32/ Op.cit. pp. 43.

33/ Op.cit. pp. 131-137, 139.

34/ Op.cit. pp. 5, 168-170.

35/ Op.cit. pp. 163.

In their view, this particular phase would consist of a management study to modernize and streamline the T.C.D.D. organization, and of a series of feasibility studies of railway lines. The supporting detailed material has been, it seems, in part provided to the World Bank by the Government and by the T.C.D.D., and in part the World Bank consulted also other sources. Nothing of this material has been available for the present sectoral review, so that information had to be sought during the interviews, which necessarily remained sketchy, and rather brief, for the pressure of the work of the persons contacted and in view of the short duration of the mission.

These conversations confirmed that Government authorities have taken very seriously the evidence of the need and the urgency for the management study outlined in the Italconsult Final Report. In particular, recommendations have been made to the Government by the Ministry of Communications in general following the conclusions of the project TUR 31, but in some cases modifying them or expanding on them. Other proposals on road and railway transport modernization have been prepared based on studies carried out within CENTO or with bilateral sources of technical co-operation.^{36/}

The basic problems to which the study TUR 31 drew particular attention, that is ensuring operational autonomy to the railway enterprise, or reimbursement of reduced tariffs for certain traffics by the Government have not been tackled. However, the Government raised the nominal capital of T.C.D.D. from TL 2500 million to 8500 million.

ii. Feasibility studies.

It should be noted that further feasibility studies are envisaged, as have been outlined by Italconsult. On the other hand, their completion is not a precondition for the formulation of either a lending programme or individual loans to be followed under a loan agreement, expected to be concluded shortly with the World Bank.

^{36/} Some of this source material is to be made available to UNDP Ankara Office in due course.

Both the programme and the lending activity to the T.C.D.D., the loans to be guaranteed by the Government, have been already agreed to. The purpose is to finance, in co-operation also with the European Investment Bank, imports of capital goods necessary over the next five years (1973-1977), for the reconstruction of several railway line links and for the assembly or manufacture of diesel engines and rolling stock.

The 1973-1977 investment programme which has been agreed by the World Bank and T.C.D.D. amounts to TL 8600 million, of which the foreign exchange component is valued at US\$157 million. Its financing within the programme may be stated as follows:

Source of finance	Million US\$
<u>Total</u>	<u>157.0</u>
Turkey foreign exchange	17.0
European Investment Bank	30.0
World Bank	110.0

Distribution of World Bank share is said to be approximately as follows:

Item of expenditure	Million US\$
<u>Total</u>	<u>157.0</u>
rails, track laying equipment, etc.	50.0
rolling stock components, ports, materials	10.0
machine shop tools and equipment	15.0
signalling equipment	7.0
imports to be specified later	22.0
other and contingencies	6.0

With the exception of the line sections for which the signalling equipment will be required, the projects are stated to be executable without further studies. The T.C.D.D. hopes that first disbursements may start by July 1972. Also, apparently, the experts of the World Bank have concluded with the T.C.D.D. that the credit agreements are not contingent on the results of the feasibility studies pending from or recommended by, the Survey TUR 31. The work under the above proposal should start as soon as practicable in order to prevent the creation of possible bottlenecks on certain sectors where heavy traffic is expected within two years, or to minimize likely hardship to areas where the closing of certain lines could threaten the disruption of local transportation patterns.

The feasibility studies of line sections that should be rebuilt, strengthened or provided with a system of signalling are:

Maras - Osmaniye, where the expectation is that the alternative of equipping the existing line between Iskenderun and Koprugazi with a signalling system will meet the transport requirements during the early years of the operations of the Third Steel Plant scheduled to start working in late 1974 with an annual capacity of one million tons of steel p.a.

Then, there are two lines Tecer - Kangal and Eregli - Zonguldak to be studied, which are included in view of a recent growth of traffic both domestic and of agricultural exports and especially due to the expansion of steel production.

The second category of feasibility studies refer to lines or branches of lines, including stations, which showed trend to, or have been already uneconomical to operate. The list of these lines in the new request is substantially that originally established by Italconsult, except for the Cobanbey-Nusaybin on the Taurus line which is not now considered for phasing out.

The definition of the feasibility studies in the new request, provided in the statement of scope of consulting services, adds the precision which has been lacking in the Italconsult Final Report. As to the closing of certain lines, the T.C.D.D. observed that since the survey by Italconsult on

several of those lines the traffic has been on the increase, as a result of new agricultural development, industrialization and progress of rural communities projects in the parts of the country served by these lines. It was also suggested that the T.C.D.D. was preparing marketing programmes and was more actively competing for traffic, also on the lines Izmir - Torbali - Ortaklar - Goncali - Denizli Sutlac - Karakuyu.

iii. Continuation of assistance

The request for a phase II railway studies could be conveniently considered in their component parts: management and feasibility studies. The institutional component of the project depends to a large extent on the setting up of the co-ordination agency and on the re-organization of the Ministry of Communications. The kind of expertise required is distinct from the feasibility studies so that the assistance could be organized through subcontracts to two separate firms of consultants. Indications are that the Government cooperating agency would prefer the engagement of two separate firms and moreover, they feel that for economic and technical feasibility studies one or the other of the several consulting firms might be engaged, with whom they have had outstanding results in the recent years.

Since the aspect of the sub-division of the sub-contract is already envisaged in the Government request, with assistance of experts of the World Bank, it may be assumed that separation of the two components of the project would not increase the total cost of the assistance either to UNDP or to the Government. Such solution would be in fact preferable, in order to deliver the feasibility studies well on time on the one hand, and to co-ordinate the institutional assistance at the level of the Government and of the enterprise respectively in full accord with the policies that will have been established by the pending legislation.

This does not mean to say that the management study has to be postponed in a fashion similar to that which has been discussed above, with regard to phase II co-ordination study. The measures taken by the Ministry of Communications and referred to in the preceding section, should be reviewed, including the draft laws which have not yet been sent to Parliament. If necessary, ad hoc expertise might be provided to conclude the study of transport policy definition and suggest draft clauses of the law required to open the way for the railways to become more competitive and commercially minded; then probably the management study and technical assistance there on could be started.

iv. Airline maintenance planning and work programmes

The 1968-1972 Plan sets out the following objectives for the country's national carrier, the Turkish Airlines (THY)

- expand the fleet and introduce new passenger jet aircraft
- reach modern airline operational standards
- build up its aircraft maintenance and repair department.

The plan set targets of 12 per cent annual growth of the airline's domestic passenger traffic (12 million passenger km in 1972) and 8.7 per cent international traffic (280 million passenger km in 1972). For the airline's service installations at Istanbul it allocated for 1968 - 1975 TL 138.4 million.

During 1970 - 1972, the Government in co-operation with UNDP and ICAO assigned to the THY an expert on maintenance planning and organization, and established a programme of fellowships.^{37/} The main duties of the expert are to advise and assist the management of the THY in the re-organization of its present system in the area of aircraft maintenance, of production control and procurement supply, and to assist the technical services to overcome their problems which arose in great part from the introduction of modern and more sophisticated types of aircraft.

^{37/} Project UNDP/ICAO/TUR/70/15 Civil Aviation, UNDP/Small-scale Executing Agency: ICAO.

It would appear that the assistance provided has been entirely successful since it facilitated, inter alia, the expansion of the fleet, incorporation of modern jet aircraft in the fleet, and achieved its efficient maintenance. For example, the airline operates at present 19 aircraft (seven F-27, eight DC-9 and four B707) while in Summer 1969 it operated only 14 aircraft (two DC-9-30, one DC-9-10, three Viscounts, eight F-27). Another example is the current negotiation of a maintenance agreement for a major international airline (PAA).

As a follow-up on his mission, the expert has suggested a five-year programme of expert assistance and of fellowships, and special training courses for airline personnel. While the suggested submission^{38/} would need substantial revisions as to the exact areas of expertise and costs, besides additional supporting data to clarify several of the outlined measures, the principles of the envisaged continuation of the project are commendable.

There are two considerations to take into account; one is

- the concern of the Government for the THY to develop the capacity to contract jet aircraft maintenance for other international airlines, in particular some of the Middle Eastern carriers, and the other
- the investment being made by the Government at the new Istanbul airport in a new technical base. Its construction started in 1971 and is scheduled for completion in 1975. The total cost is TL 138.4 million (TL 24 million of external finance) of which the 1971 expenditures were TL 9.4 million, and the 1972 programme being TL 34 million (TL 14 million of external finance)

38/ Undated draft on UNDP Ankara file bearing Project Title: Training of technical personnel of Turk Hava Yollari (THY).

The expert seems of the opinion that he has assisted successfully in the modernization of the THY technical department but that advising on a world-level of competence may require several man/years of technical assistance. He envisages the designation of one expert^{39/} for the year 1973 (provided the construction starts then) in the field of workshop layout to advise and assist in planning the hanger layout, selection and procurement of equipment, its installation, in the design of certain ancillary shops and amenities. The Expert believes that THY aims for the new base to qualify for a US Federal Aviation Administration repair station certificate, which could be attainable with such assistance.

The suggestion in this respect seems a sensible one, to permit satisfying the above objectives and assist in protecting the investment being made. It seems that ICAO endorses^{40/} the suggested additional expertise and it would not be necessary for the two experts to work as a team. The maintenance expertise can be terminated in late 1972.

The suggested five-year expertise could be surmed up as follows:

1973	shop layout expert
1974)	airline management expert
1975)	
1976)	advertising or employee relations or computerization, to be determined at later evaluation
1977)	

Each of such experts would have still the additional duties of co-ordinating and administering the fellowships programmes, advise on training etc., liaison with international aviation associations, other airlines etc. Alternatively, only the assignment of the airline management expert from 1973 could be envisaged. Comments on this suggested project are in Section E-3-ii.

^{39/} Op.cit. pp. 4 and 7-8.

^{40/} ICAO Country Brief on Civil Aviation in Turkey, dated 5 January 1972, page 2, paragraph 3a.

v. Inter-sectoral considerations

The demand for transport is a derived demand and in Turkey this depends mainly on production of the agricultural and mining sectors, mainly for domestic market but also for exports. Projects of United Nations agencies in mining and agriculture are important for the economic development of these sectors. The Turkish transport system has had a significant role also for defense, political and social purposes.

Investments allocated in Turkey to transport have been very large and rapidly new areas of the country are being opened up by new construction or improvement projects. For sectors such as agriculture or mining this is especially important as it lowers cost of transport and provides grounds for higher levels of production and consumption. For an appraisal of the inter-sectoral linkages between the transport projects and those in mining, agriculture and industrialization, it would be particularly worthwhile to know the time gap from the establishment of the transport facility to the moment a particular project becomes operational and what are the characteristics of the transportation service it requires.

The major transport projects which have been carried out with UNDP assistance have been confronted with the problem that through provision of low cost transport services the accomplishment of various economic and social objectives has been sought. In some areas this was done by deliberate action, in others without legitimate reasons, so that the transport system must be reformed to gain in efficiency. Therefore, it is important in projects such as those designed to develop export agriculture or open up new mineral deposits, to take into account the full cost of transport to the economy. Where subsidization may still be required, as a promotional element, then direct payments to the producers should be made or other similar measures devised, rather than having the transport enterprise bear the cost.

Some UNDP-assisted projects may lead before long to activities which would be projects for which specialized agencies such as ILO or UNIDO would be competent. For example, the aircraft maintenance project is a component of a long range objective to establish export capacity in aircraft production and maintenance.^{41/}

Apparently, there are indications that it would be practicable to envisage an eventual launching of a local light aircraft industry, in co-production with an European concern. This might be brought about given a successful formation of skilled workers and technicians coming from projects such as the one being carried out by UNDP and ICAO on aircraft maintenance. The present project or its continuation alone would not be likely to supply the requirements of an aircraft industry. It may call for an additional and substantial co-operation with ILO or UNIDO or both.

Another inter-relationship which could be usefully investigated is that between the transport and distributive sector. It has been the policy of the Government to keep low the transport rates and charges on any foodstuffs and other consumer goods of everyday use, especially those important to consumers in the low income brackets. The question is whether the transport charges represent any high percentage in the retail price of such goods or whether the costs charged by intermediaries and distributors could be substantially reduced and some eliminated, so that the benefits from the lower cost of transportation provided by the public sector would be passed directly on to the customer. If the mark-up between wholesale and retail prices is high for such reasons, then this should be handled by other means such as price controls or organized defense by consumers, or both.

^{41/} Second Plan, page 583.

D. SIGNIFICANCE OF UNDP ACTIVITIES

1. Relevance of UNDP-assisted projects to Government activities

The project TUR 31 encountered no difficulties while operational. It is singularly important and relevant to the Government's responsibilities for a successful development of the transport sector throughout the country. The Government has concentrated on expanding the physical infrastructure as an agent of balanced economic development; it has channelled to such investments a substantial part of all public investment funds. The Government became aware through the project that the effectiveness of those investments could be increased in several respects. An exhaustive set of recommendations and a plan for action consisting of a mix of investment and institution building are now available to the Government for that purpose.

The different component studies of the project TUR 31 offer the Government and its agencies the basic evidence and suitable tools for the implementation of the objectives which the Second Plan has had for the transport sector. As has been shown they emphasize the indispensability of planning based on strict economic criteria.

The execution of the project has led to action by the competent agencies on all the main sets of recommendations: co-ordination, railway investment programme, re-organization of a Ministry and of some departments, reform of the capitalization of State Railways, re-organization of the railways, ports, coastal shipping.

Nevertheless, some critics may feel that the action is incipient only and others may question the accuracy of the interpretation of the recommendations which are being implemented by the agencies. In any case, possibly the agencies decision-making process leaves much to be desired. In any further consultations on the country programme UNDP may wish to ascertain which of the problems of follow-up and of some of the delays or setbacks to the progress of the action which the project prepared, have been due to any shortcomings in the performance of the sub-contractors. Some of the assistance under sub-contract

possibly could have been more complete or more determined, and the need for it could have been perceived while the project was still operational.

For example, the subject of transport co-ordination has been thoroughly researched by the World Bank; it is therefore difficult to explain why the consultants have not deemed it proper to document the various existing co-ordination solutions, both as regards policies and structures, after having set out the theory of co-ordination underlying the recommended alternative solutions.

It is not sufficient merely to present a budget of a co-ordination centre, its presumed cost amounting to only one-seventh of one per cent of the Government's annual transport bill is a debatable criterion because it should be demonstrated that the proposal satisfies the purpose of co-ordination to help minimize the transport costs. It should have been shown at least what such an annual bill is "with" and "without" the centre.

In the railway study done under the project there has not been made enough use of the results of bilateral technical co-operation, which is considerable in Turkey (main line signalling, locomotive workshops, diesel locomotive assembly, tariff revision). The question arises, whether the Government's co-operating agency complied with its obligation to provide the consultants with all the available data or whether some other considerations intervened.

The railway survey under project TUR 31 required the Government to be prepared to select competent management for T.C.D.D., give it full responsibility over the operations of the enterprise, including decentralization, reductions of personnel, modification of tariff levels, closing down of uneconomic lines. At the outset of the project there was an understanding that the Government would deal with the difficult political and social aspects of such change. If there is not enough progress in carrying out the understanding, a good part of the delay may have been caused by inadequate attention to the counterpart issue under the project, on the part of the consultants. The impression is that no counterpart organization for railway re-organization has been created, though it would have been given the particular complexity of the project, an exceptionally desirable step. It is not enough to select local experts for on-the-job training, or for assisting expatriate experts to

become more readily familiar with the background of their respective assignments. The important requirement is to have for all the issues of the project, in all the various areas, dealt with by the recommendations, local experts thoroughly versed in the techniques applied to the project, who know the alternatives and reasons for the recommendations. They then become the force in the decision-making process when the follow-up stage of the project is reached.

Projects that are likely to be a part of the Third Plan may again be expected to have a common feature in that the counterpart aspect will be singularly important. It would be very helpful if some special provisions could be made for it in the preparation of projects. On those which involve external capital expenditure the UNDP formula on financial follow-up could be applied. As a rule, and essentially on projects which do not involve such capital expenditure the project should be supplemented by continuing periodic advice. For example, it could be provided that following the submission of a final report and recommendations the expert (or the sub-contractor) would participate in launching of the process of implementing the agreed recommendations. Then there would be arranged a periodicity of return assignments. It could have been arranged that visits would be scheduled a number of weeks after a lapse of a stated period of months, repeated as might be necessary.

2. Related technical assistance from other sources

Bilateral official sources of technical co-operation have been very prominent in the carrying out of transport sector programmes and projects. This seems especially so where such activities relate to investments with a foreign exchange component, for the latter is frequently obtained on concessionary terms. Where the source has a specific responsibility for a sound preparation of the project, as a

rule this is done with assistance^{42/} of foreign experts. Loans and grants have been the usual form of financing such expertise when it is obtained from official agencies.

It has not been possible to compare technical assistance provided from other sources to that of the UNDP but information from interviews has been taken into account in the review of on-going projects, in particular the railway line improvements related to USSR assistance to Turkey's Third Iron and Steel complex at Iskenderun or the Seydisehir aluminium plant, or USA's assistance on the Eregli Iron and Steel plant. Also information was received on projects which could be considered as preliminary or complementary to the main UNDP-assisted projects. From this appraisal it does not seem that any overlapping developed but some doubt might be voiced, whether in some cases at least, sufficiently careful account has been taken of the previous work done and in any case of the background research accomplished under those other technical assistance projects.

For example, the Railroad Studies of the project TUR 31 hardly take any account of the systematic and detailed assistance provided by the UK assistance on the modernization of locomotive and rolling stock workshops.^{43/} The impression is unavoidable that the Italconsult's treatment of the subject in their report could have given a leeway to the T.C.D.D. to slaken on the implementation of the detailed study.

Other similar situation of doubt arises in regard to study of the T.C.D.D. tariff and commercial activities. The sub-contractor's recommendations in this respect, while correct, they could have been supported by more complete background data in the reports. The question arises whether they were familiar with the results of another UK-assisted project on railway development programme^{44/} carried out in 1967-1968.

^{42/} In connection with the manufacture of diesel electric locomotives, T.C.D.D. concluded a technical cooperation agreement with Traction-Export of France. Technical assistance on design and construction of the Bosphorus bridge (cost 2000 million TL) or on shipbuilding programme of the Government are other examples.

^{43/} E.J. Larkin and associates: Report on the Re-organization of the Main Workshops and Motive Power Depots on the Turkish State Railways. Library of UK Embassy, Ankara.

^{44/} Davies and Robson: Moving Forward.

On the management side, no mention is made of the results of sustained assistance of the USA to the Ministry of Public Works and the Directorate General of Highways except for the mentions of their high efficiency in comparison to other agencies.

The USAID provided a major share of technical assistance to the Ministry of Public Works, and especially to its Directorate General until recently. However, reports on these activities are not available at the Agency's Office in Ankara. In any case the Agency has concluded that it would not be in position to provide technical assistance either to railways or to roads, or to other modes of transport in the near future. As for investment capital for the sector, the relevant financial institution of the U.S. is the Export-Import Bank.

E. POSSIBLE AREAS OF FUTURE ASSISTANCE

Discussions of the Third Five-Year Development Plan and the material available on its preparation indicate that the Plan principles of economic and social development result in assigning to the transport sector as the main objective the obligation to cover the increased demand with minimum costs. The different modes then have specific objectives, such as that expanding capacity in shipping and air transport should be competitive with external markets, or that rail transport should modernize so as to be in a position to carry increased traffic generated by expansion in the industrial sector.

1. Transport planning

Through the provision of a further phase to the project TUR 31 the UNDP would continue to cooperate with the Government in two areas where this is most necessary for transport planning: show ways how to check unnecessary pressures on insufficient domestic savings, and lessen the dependence on foreign sources of finance by means of rigorous appraisals of the developmental effects of contemplated investments. Presumably, this assistance will be carried out at an early stage of the Third Plan and it will be expanded to include a project which attempts to raise the level of administrative efficiency of a State Enterprise. Hopefully, this may lead to setting an example worthy of further application and may extend to the Ministerial level and to the State-owned complex of transport enterprises and related industries.

The framework of multi-lateral and bi-lateral technical assistance contemplated for the Third Plan appears to be such that UNDP will be expected to remain their principal agent concerned with the central issue, transport co-ordination. The plan will spell out the required measures, that is, rationalization with a more selective approach to investments on infrastructure and mobile equipment; improving the profitability of state enterprises; and increasing resources of other entities of the public sector, undertaking investments in the sector. Whatever form this takes, of particular importance for planning the United Nations co-operation is

the specific determination which has been already shown, to bring to a final conclusion the establishment of an agency to administer the co-ordination of public investments and of services of the different modes in the sector.

The steps taken so far by the Government show that UNDP is considered as the principal or probably the only source for the supporting technical assistance and that the provision of it is to continue throughout the whole Plan period, some of such assistance to be in the form of small scale projects, in the latter part of the Plan quinquennium. The UNDP may wish therefore, to take the initiative, when preparing its programme of assistance, to ensure that the participating agencies supplement each other. In the field of transport planning and coordination, the competent agency is not only the World Bank but also the United Nations. The latter have special interest in coordination, transport planning as regards tourism development, multi-national cooperation in transport co-ordination planning, new transport technologies, combined transport services, areas which are to come to the foreground in Turkey.

As for the specific question of institutional modernization, there is a significant development in that a committee recommendation^{45/} has been presented for inclusion in the Third Plan which concludes that a Ministry of Transport should be created, to be the authority under which co-ordination and transport regulation is administered. The present Ministries of Communications and Public Works would be merged in the new Ministry. This is obviously a long-term proposition and progress made so far in that direction is the presentation to Parliament of the new organic law of the Ministry of Communications. The adoption of the law is expected to facilitate the implementation of the supplemental assistance to establish a transport co-ordination centre. (this project is discussed in a preceding section).

^{45/} Reports of Committees on air transport, ports and general respectively, have been published.

2. Special Railway (TCDD) studies

The Government has already submitted a request for this project, the objectives of which, as the UNDP Resident Representative noted, are a) a management study of T.C.D.D., and b) feasibility studies of infrastructure rehabilitation and rationalization. It now appears that the management component could be combined with a project on transport planning, already approved by UNDP and the special feasibility studies could proceed as early as practicable.

However, the tasks of improving either the organizational structure or the infrastructure and physical conditions of its equipment, are much more difficult than the ongoing and proposed projects suggest. There could be tapped still other sources of assistance, for example, through closer cooperation of T.C.D.D. with the International Railway Union (UIC) and with transport bodies working under the auspices of EEC.

The UIC is especially competent to cooperate with the Turkish railways on problems of management, administration, technical norms, manpower rationalization, training and specialization. It would seem that much could be accomplished by systematically arranging for and developing UIC advisory services, besides a regular participation of Turkish railway specialists in technical bodies of the International Railway Union. The costs of such expertise and related fellowships might be subscribed by a European Government in conjunction with the UNDP-assisted railway project.

There are also other international railway organizations of potential interest to Turkish railways. For example, the Union of road services of European railways, is the body through which long distance tourist bus lines are operated and which could assist T.C.D.D. in entering this field. Or the Eurofima, European Society for the financing of railway rolling stock which, as the name implies, provides loans for railways' equipment put in a pool to run international services.

To some extent, cooperation with European railways is discussed in a study of the CENTO railway link Turkey-Iran, but its recommendations on action by T.C.D.D. to attract international trade to its system are too general. On the other hand, the assembled trade data and the analysis may

lead to conclusions that there is for T.C.D.D. potentially important source of revenues, which could be exploited if the railways introduced the necessary organizational and tariff structures, as the present ones inhibit T.C.D.D. from coping with such traffic. Additionally attending to this kind of international traffic is related also to developments in the use of large containers and combined transports by sea and rail, on which T.C.D.D. has made a modest start. In brief, T.C.D.D. is aware of the problem which it has to improve its international railway services and assistance on its solution is timely. Largely it is a question of transfer and adaptation of technology for the solution of which could again be arrived at in cooperation with European organizations and agencies.

3. Civil Aviation

i) Training and fellowships

The Department of Civil Aviation of the Ministry of Communications has been coordinating the preparation of the civil aviation subsector for the Third Plan, on the basis of data submitted by the Directorate General of State Airports (DHMI), the Ministry of Public Works and the Turkish Airlines (THY). The Department's tentative proposals for inclusion in the Plan are: progressive renewal of air traffic control, navigation and aeronautical tele-communications equipment of the airports and of the air traffic service; construction of two to four airports, one of them to be an international aerodrome; further expansion and modernization of the THY fleet of aircraft.

The Department recognises the need for competent personnel to man such programme. It proposes, therefore, to provide training for new entrants, and create opportunities for the existing staff to train in new techniques and increased responsibilities. Even with maximum practicable use of the national civil aviation training school and of the Air Force institutions, this is not entirely satisfactory. The Department, therefore, decided to formulate a five-year training and fellowship project covering the different disciplines of civil

aviation. It extends to air traffic control, airport management; servicing electronics equipment, telecommunications, airline pilots, other air crew, ground personnel. The Department already submitted the project to SPO for submission to UNDP and the executing agency, ICAO.

ii) Technical services of THY

The airline will require some follow-up on the assistance on aircraft maintenance and workshop layout, provided by the UNDP during the Second Plan, by the small scale aircraft maintenance project. It seems very likely that the Government will attach priority to such project and request UNDP assistance.

iii) Short technical assistance missions

The Government is interested in strengthening and expanding the system of technical assistance provided by inter-regional advisers of ICAO, with which it has the most satisfactory experience. In order to assist an orderly implementation of the Third Plan, special attention could be given to the priority areas of expertise indicated by the Government as follows:

- Air traffic service

The civil aviation authorities have been studying the setting up of a national air traffic service and the strengthening of schools for the air traffic controllers. However, no precise steps have been made so far so that an assessment of the requirements through an advice by ICAO expert could expedite the decision.

- Aerodrome engineering

Under the 1968-1972 Plan, in the tourism sector, the planning has started for a new aerodrome at Mugla in the Antalya region which would facilitate visits of foreign tourists. Besides building the airport also the basic road network must be provided by public sector, while tourist installation would be made by the private sector.

A first allocation has been made in the 1972 programme for the Southwest Anatolian Airport at Mugla. Survey project preparation and construction is scheduled at a total cost of 15 million TL

(of which TL 5 million is external finance). However, little progress has been made in deciding the site, layout and related matters. It has been suggested that a short mission by two ICAO experts, an aerodrome engineer and air transportation economist should be provided at an early stage of the Third Plan.

4. Other projects

As has been commented elsewhere already, for the Third Plan, the key projects of technical assistance in the transport sector are those for establishing the coordination agency and for railway studies to adjust the T.C.D.D. programmes and projects to the new transport policies. However, the results of previous transport studies indicate several other areas where assistance is also necessary and could be usefully envisaged, but is overshadowed by those two projects. It is therefore appropriate to mention here that the draft Third Plan indeed anticipates the need for technical cooperation beyond that on the two transport project, but so far the list has not appeared nor are the desired sources stated, whether they would be bilateral or multi-lateral.

The role of UNDP could be that of encouraging the formulation of external cooperation requirements to meet the targets, in the terms of technical assistance for projects which call for capital investments as well as those which do not. Then for the projects which will be identified, UNDP could suggest ways of obtaining the necessary budgetary resources and channels for bringing in the expertise.

One of the priority areas would be port administration, organization and management, and another, development of both short and long term projects of national shipping line. The competent agencies are United Nations, IMCO and UNCTAD, who could be invited to submit appraisals and assist the Government in detailed project preparation.

There are also projects urgently needed which would improve and expand road transport services. On the administration level the need to revise transport and traffic laws, rules and regulations has been recognised by the Government and has been on its programme for some time now, but even more important would be to provide technical assistance to the industry itself.

It would be specially desirable, in view of the efforts to increase agricultural exports to markets in Europe, to consider technical assistance on management and organization of a Turkish enterprise specializing in international road services, including refrigerated transport. A more general field is the organization of cooperatives as owners of road transport enterprises. Advantage could be taken of the precedent that cooperative effort has been started in other industries, some of them channelling savings and remittances of labour force that has migrated to Western Europe. Domestic road services would gain therefrom, as in particular the present organization of the trucking business through forwarding agents and by brokers is highly unsatisfactory and should be eliminated as early as possible. The United Nations, in cooperation with the Economic Commission for Europe, would be the agency which UNDP may further consult on matters of road transport.

