

National Development Strategy 2007-2010

Transport and Communications Sectors

INTRODUCTION

Transport and communication sector has vital importance as it offers logistical support to other economic activities and stimulates economic production activity. The infrastructure and operational means of this sector were damaged during the period of wars which lasted three decades. The embargo and the economic sanction had negative impact on this sector; most of its companies and organizations stopped their activities in addition to the deterioration due to Iraq's isolation that prevented the country from keeping up with scientific and technological development.

Activities of transport sector include water transport, railway, civil aviation, ports, air transport, public transport, cargo, meteorology, highways, arteries, rural and border roads.

Activities of communication sector include: telephone exchange centers, post, local communication networks and systems, public services, and internet.

Storage includes all types of silos.

This paper will address the sector's characteristics, previous plans and strategies related to the sector, which is the "National Development Strategy (NDS) 2007-1010", investment plans and programmes 2004-2008, and also the real fact of the sector and each activity based on the available information, data, and indicators for the years 1979, 1988, 2002 and 2008, and also the challenges, impediments and problems that face this sector.

FIRST: Characteristics of transport & communication sector

1. Direct and daily impact on the lives of the people.
2. Linkages with other economic sectors

FIRST:

Before assessing the Sector's old plans and strategies, the real fact, and before diagnosing the problems and challenges facing the sector's growth, a description of the following sector's characteristics must be mentioned:

1. Transport & Communication Sector is important for the Iraqi economy. This importance of this sector is embodied in the direct daily impact on the lives of people. People need transportation and communication means to perform and fulfil their daily activities.
2. The Sector has complex and close relations with other economic sectors and affects growth and development, therefore, economic sectors cannot be developed without adequate and efficient infrastructure, as each type of land utility requires a suitable road network.
3. The Sector's connection is extends to include large areas; most of the Sector's projects covers more than one area and more than one

governorate. Therefore, the projects need huge investments for construction and maintenance.

4. The Sector should apply the new technologies to catch up with the rapid and continuous scientific development.
5. The impact of the transport sector activities and services reaches neighbouring countries specifically and other countries.
6. There is a close relation between projects implemented by the Sectors (railways, roads, ports and airports).
7. The Sector offers good opportunities for the private sector – Iraqi and international- to invest in the implementation and operation of a number of the sector's projects.
8. Many of the Sector's activities, specially the transport sector standards of operations are governed by international agreements and restrictions.
9. The cost of oil and gas has direct impact on the cost of implementing and maintenance of transport projects, and the cost of operating the different transport means.

SECOND: Assessing old plans and strategies

The preparation of a five-year development plan requires revision of the strategies and plans that were applied, reconsideration of the indicators that were adapted, and investments that were assessed for the implementation of the projects. In this connection, the NDS 2007-2010, plans and investments approaches for 2004-2008, and earmarked investments will be discussed.

1. NDS 2007-2010:

According to the NDS 2007-2010, the transport section consists of 40 690 Km roads, two international airports, three local airports, 6 ports for cargo, two ports for oil, and 2450 Km railways. The paved roads form 70% of the roads in Iraq. Services such as post, communication and international communication network are inefficient and require improving the transport and communication network in all governorates. For this reason, the NDS stated that the Sector needs huge investments and amended operational and managerial structures to improve the services. Iraq can solve these problems through applying new technologies in this area, creating the favourable climate through applying appropriate policies, and setting the proper time frame.

According to the estimations of the NDS, the transport sector needs USD 37 billion= ID 44400 billion to be distributed as follows: (a) \$ 30 billion=ID 36000 billion to the activities of the Ministry of Transport (b) \$ 6 billion=ID 7200 to the activity of the Ministry of Housing and Construction-Bridges & Roads (c) \$ 1 billion=ID1200 billion to communication sector. Table (1) reflects the Strategy's estimations related to the investments needed in the transport and communications sector for the years 2007-2010. Investments for bridges and roads are included in the activities of housing, which was estimated by \$ 6 billion. The total estimations related to the transport and communications sector represent 19.71% of the total investment expenditures \$ 187.7 billion, distributed as follows:

- Participation of the transport sector, excluding bridges and roads, reached 15.98% of the total investment expenditures.

- Participation of the bridges and roads reached 3.19% of the total investment expenditures
- Participation of the communications sector reached 0.53% of the total investment expenditures

Table (1)
Investments Needs Assessments for the economic sectors 2007-2010

Year	2007	2008	2009	2010	Total 2007-2010
Indicators					
Investment Expenditures					
Oil sector	8.4	8.7	9.3	9.6	36.0
Electricity	6.0	4.4	3.5	2.6	16.5
Water resources	1.0	1.5	1.5	1.2	5.2
Agriculture	1.1	1.0	1.0	1.0	4.1
Industry	0.3	0.2	0.2	0.1	0.8
Transport	7.5	7.5	7.5	7.5	30.0
Construction	1.5	1.5	1.5	1.5	6.0
Housing	10.0	12.0	15.0	15.0	52.0
Health	2.5	3.3	4.4	4.5	14.7
Education	0.6	0.6	0.6	0.6	2.4
Communications	0.3	0.3	0.2	0.2	1.0
Water and sewage	1.4	1.9	2.5	2.7	8.0
Provinces and governorate development	2.5	2.5	3.0	3.0	11.0
Total Investment Expenditures	4301	45.4	49.7	49.5	187.7
Source: NDS 2007-2010, updated investment needs prepared by the Ministry of Planning and Development Cooperation, and other ministries, January 2002.					

Transport Sector

As estimated by the NDS, investments needs for the transport sector is estimated by \$36 billion - \$ 37 billion to the Ministry of Transport as shown in tables 2 and \$ 6 billion to bridges and roads as shown in table 3.

Out of the total amount of \$ 30 billion which represents the investments for the Ministry of Transport, the amount of \$7.5 billion was earmarked annually to the transport sector for each year of the Strategy age as shown in Table 1. Accordingly, the different activities of the transport sector excluding bridges and roads represent 15.98% of the total investment expenditures \$ 187.7 billion earmarked for the development of all economic activities.

Transport Sector –excluding bridges and roads – includes the following activities:

- Water transport
- Railways
- Civil aviation
- Ports
- International transport
- Air transport

- Internal transport
- Cargo
- Meteorology

Table 2
Needed investments in transport sector 2007-2010 –excluding bridges and roads-

(\$ million)

Project	years			
	2007	2008	2009	2010
Water Transport	195.0	195.0	195.0	195.0
Railways	3975.0	3975.0	3975.0	3975.0
Civil Aviation	1365.0	1365.0	1365.0	1365.0
Al-Dhilal Company Project	42.0	42.0	42.0	42.0
Iraqi Airways Projects	40.5	40.5	40.5	40.5
General Establishment for Passengers Transport	26.3	26.3	26.3	26.3
General Establishment for Water Transport	13.5	13.5	13.5	13.5
Meteorology Commission Projects	31.5	31.5	31.5	31.5
Total	7500.0	7500.0	7500.0	7500.0

Source: NDS 2007-2010

Table 3
Needed investments in the activity of bridges and roads 2007-2010

\$ million

Project	years			
	2007	2008	2009	2010
Completing the second passage of the highway: Diwaniya-Nasiriya	182.0	182.0	182.0	182.0
Highway 2	166.5	166.5	166.5	166.5
Internal and border roads	124.5	124.5	124.5	124.5
Secondary passages of the paved roads	311.0	311.0	311.0	311.0
Road detours outside city centres	72.0	72.0	72.0	72.0
Treating crossroads of road and railways	15.0	15.0	15.0	15.0
Rural roads	50.0	50.0	50.0	50.0
Reconstructing paved roads	80.0	80.0	80.0	80.0
Completing bridges	12.0	12.0	12.0	12.0
Replacing floating bridges by fixed constructed bridges	41.0	41.0	41.0	41.0
New bridges	145.0	145.0	145.0	145.0
Municipality projects	302.0	302.0	302.0	302.0
Total	1500.0	1500.0	1500.0	1500.0

Source: NDS 2007-2010

Table 3 shows that the largest investments exist in the “Secondary passages of the paved roads” as investment rates reaches 20.7% of the total needed amount; second highest rate is 20% for Baghdad Municipality projects.

The actions needed to improve the activities of the sector – excluding bridges and roads – as identified by the NDS 2007-2010 are:

- a. To continue dredging work in Shatt Al-Arab and Um Qasr Port
- b. Wreck removal in Shatt Al-Arab and Um Qasr Port
- c. Exploring potentials to improve transport system and routes
- d. Rehabilitating and renovating railway stations including maintenance work
- e. Developing/modernizing training centres to upgrade skills of railways employees.
- f. Preparing a railways strategy to assess the current situation and to offer partnership opportunity with the private sector.
- g. Improving airports and the civil aviation strategy, and preparing comprehensive plan to manage services.
- h. Developing programmes for the privatization of some activities in the sector, specially communications, air, land and water transportation.
- i. Re-training operational and managerial staff working in the ceased activities such as civil aviation and navigation.

Communications Sector

According to the NDS 2007-2010, the investments needed in communications sector were estimated by \$ 1 billion to be dispensed as follows: \$ 300 million for the years 2007 and 2008 each, \$ 200 for the years 2009 and 2010 each. The investments of this sector form 0.53% of the total investment expenditures amounting to \$ 187.7 billion to cover all economic development activities as shown in Table 1.

The NDS shows the improvement in telephone communications. The number of land lines subscribers in land increased from 794 198 to 2 800 000 in June 2005, the number of internet subscribers was doubled, while the number of mobile phones subscribers jumped from 488 966 to 2 500 000, satellite services extended to most of the population, and mobile networks are operational in the main urban areas.

Table 1 clearly shows that investments in the “cables supply and communication network arrangement- capacity 1600 lines” project reached highest rate 41.5% of the total amounts of \$ 1 billion allocated to investment, the “Cell phones for 1500 000 subscribers project” reached the second highest rate 32.8%.

Table 4
Needed Investment in Communications Sector 2007-2010

Project	Years			
	2007	2008	2009	2010
Installation of telephone exchange units- capacity 1200 000 numbers	73.0	73.0	49.0	49.0
Cables and networks-capacity 1600 000 lines	124.5	124.5	83.0	83.0
Mobile phones for 1500 subscribers	98.0	98.0	66.0	66.0
Supply of 4000 public telephones	1.0	1.0	1.0	1.0
National satellite communications network	2.0	2.0	1.2	1.2
Delivery of Television and broadcasting service to Fao City	0.6	0.6	0.4	0.4
Linking particular offices and other branches	0.3	0.3	0.2	0.2
Total	300.0	300.0	200.0	200.0

Source: NDS 2007-2010

Table 6
Communications Sector: Indicators of development objectives and future expectations for the years 2007 and 2015 as mentioned in the NDS 2007-2010

	Indicator	Available figure	Year	2010		Target for 2015
				Expected	According to the current situation	
1	Number of telephone land lines and mobile phones per 100 individuals	5.1	2005	7.4	7.2	9.4
2	Number of personal computers/per 100 individuals	3.6	2004	5.3	5.3	7.2
3	Satellite use / per 100 individuals	32.0	2004	46.7	46.7	64

Source: Annex 1 of the NDS 2007-2010, Central Commission of statistics and Technology Information, Ministry of Planning and Development Cooperation

The NDS 2007-2010 identified the required actions to improve the activities of communications sector:

- a. Reconstructing and expanding the existing telephone exchange units and the local distribution networks, and to embark in civil work to extend telephone services to 3.3 million subscribers.
- b. Establishing new long distance network and ensuring long distance calls.
- c. Restructure post system including post services and the existing buildings in order for Iraq regain its position.

The evaluation of the NDS 2007-2010 is summarized by the following notes:

- a. The NDS briefly addressed the activities of the sector in terms of addressing the real fact of the current activities and identifying the different activities of

the sector. This applies to the communications sector and bridges and roads activities as only projects were mentioned.

- b. The estimated amounts allocated for developing transport & communications sector reflect the needs, at the same time express ambition in terms of implementing the activities of the transport sector. Table 3 shows the amounts estimated by the NDS but were not allocated to support the investment programmes funded by the government, and the share of foreign investment was not mentioned. Moreover, the security situation was not stable to start the implementation of projects listed in the NDS though the amounts were little.
- c. Indicators related to transport & communications sector mentioned in the NDS covers few numbers of the sector's activities.

2. Investment Plans and Programmed 2004-2008

The investments earmarked to this sector for the period 2004-2008 amounted to 3, 540, 074 trillion Iraqi Dinar. The highest rate of allocations was achieved in 2008 as it reached

35.9%, 19.6% in 2004,

15.9% in 2006, and

14.5% - 14.1 in 2005 and 2007 consecutively as shown in Table 6.

Table 6

Amounts earmarked to the Transport and Communications Sector for the period 2004 – 2008 distributed according to ministries

ID million

Year \ Ministries	2004	2005	2006	2007	2008
Ministry of Construction and Housing		126412	117547	138282	224636
Ministry of Transport		145450	154407	133200	386125
Ministry of Communications		200000	248000	192800	379486
Ministry of Municipalities and Public Works		3225	4677	3700	36374
Ministry of Defence					21534
Ministry of Culture			2300	1900	3644
Ministry of Commerce		6500	6500	13250	15237
Ministry of Science & Technology		467	500	520	4863
Baghdad Municipality		18009	27000	30236	178661
Iraqi Media					20000
Total	694632	500063	560931	513888	1270560

The Ministry of Communication received the largest investments, the rates in 2006 reached 44.2% and 37.5% in 2007, while the Ministry of Transport received highest largest investments in 2008 (30.4%), Ministry of Communications (30%), Ministry of Construction and Housing - General Commission for Roads and Bridges 17.7%). The remaining investments were distributed to the other ministries as shown in Table 6.

Investments distributed in 2004-2008 according to the different activities: transport and communications. Roads were indicated in Tables 7 & 8. Table 7 shows that the activities of the railways received the largest investments allocated to the sector followed by ports activities and civil aviation. The remaining investments were delivered to other activities of the Ministry of Transport.

Table 7
Size of investments earmarked to the Ministry of Transport for the period 2004-2008 according to its activities

Year / Activity	2004	2005	2006	2007	2008	Total-for the period 2004-2008
Railways	70976	59850	63836	57075	110395	362132
Ports	37000	21600	35218	26950	57383	178151
Civil Aviation	83165	25000	9200	4800	36250	158415
Airways	6000	5500	2000	250	14250	28000
Water transport	5320	1500	1500	3000	56509	67829
Land transportation	34575	250	1000	2125	2259	40209
Passengers & Official delegations transport	10497		10000	7000	58711	86268
Private transportation	1809	1950	3600	9000	16778	33137
Al-Dhilal Company	750			2000	7600	10350
Meteorology	2919	3000	4500	4500	10626	25545
Others*	48653	26800	23553	16500	15304	130810
Total	301664	145450	154407	133200	386125	1120846

* Includes implementation of projects, Ministry HQ, Gulf Academy.

Table 8 shows that public services activities obtained the largest investments during 2004-2008 followed by multicast delivery & communication networks, local networks activities and telephone exchange activities.

Table 8
Investments earmarked to the Ministry of Communications during 2004-2008
according to the activities

Year / Activity	2004	2005	2006	2007	2008	Total
Post	12175	300	1000	1370	7830	22675
Telephone Exchange Units	31352	24500	57000	20000	40286	173138
Local networks	57500	28000	31000	30000	57273	203773
Communications via satellite	2400	-	-	-	-	2400
Multicast delivery, communication networks and lines	102039	56041	58100	77450	109990	403620
Public services	55661	90859	80900	55780	149466	432666
Internet	30000	300	20000	8200	14641	73141
Total	291127	200000	248000	192800	379486	1311413

The following table indicates that the percentage of allocations in the budget, compared to the allocations in the NDS, is 4% in 2007, 12% in 2008, but it dropped in 2009 to 10%.

Table 9
Implementation and achievement rates of transport & communications sector in investment programmes to the proposed allocations in the NDS.

Year / Activity	2007			2008			2009		
	NDS allocations	Budget allocations	%	NDS allocations	Budget allocations	%	NDS allocations	Budget allocations	%
Transport	11340	306	3%	10620	852	8%	10620	739	7%
Communications	378	195	51%	354	404	114%	236	281	119%
Storage		13			15			41	
Total/sector	11718	514	4%	10974	1271	12%	10856	1061	10%

THIRD: Current situation of the communications and transport sector, and comparison between the indicators of 2008 and the years 1979,1988 and 2002.

1. Transport Sector:

Ports activities: Iraq has four commercial ports and two oil export platforms. The capacities of these ports reach 17.65 Mtons/per year; while the payloads handled in commercial ports reached 11854061 tons in 2008.

Iraqi ports need (1) re-organization in terms of management and operation, (2) introducing electronic systems, and (3) review overstaffing to solve ports budget problems, but the solution should be accompanied by offering separated staff new work opportunities. A number of projects were listed in the investment budget to meet the needs of Iraqi ports to new equipment such as incubators, cranes, container carriers and rehabilitation/protection cleaning up Um Qasr port and Khor Al Zubair. The General Company of Ports possesses seven dredging machines, five of them are operational. There are also 12 tugs, eight of them are operational.

Sea transport sector: Iraq has three ships; conclusion of agreements for joint transport with international companies is in process to transfer Iraqi exports and imports, and to offer work opportunities and training for Iraq cadre.

River transport: In this sector, the work is almost on hold due to the security situation, lack of submersible pumps in the rivers and the need to dredging works in addition to the presence of obstacles in the rivers such as the remnants of bridges damaged during the wars and the construction of new temporary floating and service bridges.

Railways activities: The total length of railways reached 1645 Km in 1979, while it reached 2295 in 2008. There are 250 wagons; only 65 are operational. There are 171 engines and the number of passengers reached 3351 in 1979 and 107000 in 2008. The weight of goods amounted 257 000 tons.

The operational railways are: Baghdad-Basra, Baghdad-Samara-Mosul Rabee'a. Work is ongoing to duplicate Baghdad-Basra railway and Baghdad-Mosul in addition to rehabilitation the existing lines.

Civil Aviation activities: There are five international airports- Baghdad, Mosul, Basra, Erbil, Sulaymaniya and Najaf. Work is ongoing to (1) rehabilitate Baghdad International Airport-Samarra Terminal (2) Install new airport arrival departure boards, (3) Build an airport hotel, and (4) change the airport air bridges.

Iraqi Airways owns two planes and three rented planes. The number of flights reached 5534, while the number of arriving passenger was 159010 and the number of departing passengers was 182581. In 2008, Iraq started flights with Turkey and Scandinavian countries. Iraqi Airways is expected to regain its activities after settling all issues and lawsuits established by Kuwait Airlines.

Public Transport: The security situation has negatively affected the services of public transport inside the cities including Baghdad. Due to (1) congested and blocked streets, (2) the high number of check points, and (3) lack of busses owned by the General Company of Public Transport, the services offered in this respect can be considered unavailable. Transportation between cities – due to the slight improvement in the security situation –

The General Company of Public Transport resumed its activities between the governorates day and night. The number of busses operating between the governorates reached 1132 in 2008.

2. Communications Sector

This sector includes the activities of post, telephone exchange units, local network, multicast communication lines and internet.

In 2002, there were 1671 telephone exchange units in Iraq, electronic and mechanical, but the number dropped to 292 in 2007 due to the war and acts of vandalism. Currently, the number of telephone lines is 1306111; telephone density per 100 users differs from one governorate to another (e.g. in Baghdad 7.3). There are 351 post offices countrywide in 2007, and 55227 post office boxes. The following table includes indicators.

Table 10
Main indicators of communications sector 2002-2007

Indicators Year	Number of Telephone exchange units	Total telephones	Post offices	Post office boxes
2002	1671	1183.3	314	44218
2003	279	1128.3	-*	-*
2004	278	1198.2	282	47395
2005	285	1235.8	285	49094
2006	288	1278.2	286	55028
2007	292	1306.1	351	55227

* Unavailable information

- In 2002, there were (19) internet services open centres, in 2003, there were (55) and in 2006 (26).
- Mobile phones are the most important means of communication in Iraq. Though this service. The number of mobile phones users reached 15420500, the coverage rate of all networks cover between 30%- 90%.

3. **Bridges and Roads Sector:**

The total length of the roads (outside Baghdad) is 42000km in 2005. The roads include the main roads and highways and streets which link cities with governorates, and the rural roads that link residential compounds in the villages with the main roads as explained below:

* Highway	1084km
* Artery	11000
* Rural roads	3700km
* Border roads	11000km
* Streets	15200

Iron steel and Concrete Bridges: There are 1200 iron bridges and 60 floating bridges countrywide. This network did not meet the needs of the country specially the rural roads. According the international standards, there must be 1 km² /100 people, Road density

about 0.18 km/km²; the rate should reach 0.75km/1km². In another word, the size of the road network must be 240000 km taking into consideration the 1997 census which stated 57 people/1km². If the uninhabited desert be excluded, the current need for new roads is 20000 km. Table 10 shows the length of roads according to the governorates for the years 2000 & 2005.

Table 11
Roads length for the years 200 & 2005 according to the governorates

Governorate	Roads in 2000	Roads in 2005	Size of Govenorate (km ²)	Road density
Ninevah	3130,5	3193,5	41320	12,94
Dohuk	1439	1439	6374	3,43
Erbil	3762	3762	14428	3,84
Suleimaya	327305	3273,5	16482	5,03
Kirkuk	165905	1749,95	9426	5,39
Salah Addin	1445,5	1455,5	21326	14,65
Baghdad	130204	1319,9	5023	3,81
Dyala	4024,5	1062,5	19047	9,69
Anbar	348808	3512,6	89540	25,49
Babylon	1076	1082,6	5503	5,08
Kerbala	868	881,2	52856	59,98
Najaf	546	578,35	26834	46,40
Diwaniya	781	857,4	8569	9,99
Wassit	2001	2056	17922	8,72
Missan	447405	4519,6	16774	3,71
Muthana	1221	1231	49206	39,97
Dhi Qar	956	1010,2	13668	13,53
Basra	534508	5346,5	19702	3,69
Total	40795	41331,3	434000	10,50

4- Storage Sector

This is one of the activities of the Ministry of Commerce-Department of Grain Trade. The number of silos in Iraq is 45 with different storage capacities which varies from 500 000 tons to 750 000 tons. There are two types of silos:

1. Grain silos
2. Roof silo?

Table 12 illustrates storage capacities of wheat and barley stored in silos (bins, Bunkers and benches?)

Table 12

Capacity Storage of the silos and storage space of the General Company of Grain Trade.

Governorate	Capacity storage in silos and storage spaces of the General Company of Grain Trade				Current Storage capacity for rice
	Bins	Bunkers	Outlets	Total storage capacity (ton)	
Ninevah	353000	446200	91500	890700	42750
Dohuk	105000	23000	-	128000	-
Erbil	112000	114800	-	226800	7500
(Ta'mim)Kirkuk	20000	330100	40000	390100	7500
Salah Addin	235500	436200	22000	693700	22100
Suleimaniyah	-	-	-	-	-
Anbar	10000	172000	-	182000	12350
Dyala	160000	129800	-	595100	57450
Baghdad	362500	232600	-	565100	57450
Wassit	42000	134000	17000	193000	9350
Najaf	66000	137900	-	203900	40400
Qadissya	15000	128100	-	143100	17300
Babylon	93000	129300	-	222300	14200
Missan	10000	85400	-	95400	7200
Muthana	10000	24500	-	34500	15000
Kerbala	10000	-	1000	20000	5000
Dhi Qar	20000	9800	13500	43300	1100
Basra	125000	-	-	125000	53950
Total	1749000	2533700	194000	4476700	353150

FOURTH: Challenges and problems

The preparation of plans and the implementation of projects for the Transport and Communications sector face a number of problems and challenges:

1. The government investment programme does not include annual financial allocations earmarked for the transport and communications sector.
2. Lack of private sector (Iraqi and foreign) participation in the implementation and/or investment in projects, especially transportation projects.
3. The organizational structures of some of the companies and institutions of the transportation and communications sector are old.
4. Not keeping pace with scientific development and the new electronic methods are not used.
5. Some of the projects of this sector need to be implemented through specialized international companies, but such companies don not take the risk to implement projects since the security situation is not encouraging.
6. The process of opening bids and offers is complicated.