



**REPUBLIC OF TURKEY  
MINISTRY OF TRANSPORTATION  
GENERAL DIRECTORATE OF HIGHWAYS**



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**IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY &  
EURO-ASIAN ROAD LINKS**



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**TEM Master Plan Implementation Workshop &  
20th session of the Working Party on Transport Trends and Economics  
(Geneva, 12-14 September 2007)**



# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

## STATUS OF TEM NETWORK IN TURKEY (as of 01.01.2007)

TOTAL LENGTH (KM)	PROGRAMMED (in study, preliminary design and design phases)		UNDER CONSTRUCTION		IN OPERATION		TOTAL
	Single carriageway	Dual carriageway	Single carriageway	Dual carriageway	Single carriageway	Dual carriageway	
<b>MOTORWAY &amp; EXPRESSWAY</b>	-	677	-	173	-	1760	2610
<b>STATE ROAD</b>	-	-	-	-	2397	1930	4327
<b>GRAND TOTAL</b>							6937

TEM Network of TURKEY contains 29 % of all TEM Network



# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY



**TURKEY TEMSTAT & E- ROAD MAP**

MOTORWAY	In operation (dual two-lane) (2x2).....	102
	In operation (dual three-lane (2x3) or more).....	1 534
	Under construction.....	173
EXPRESSWAY	Programmed or planned.....	677
	In operation (dual three-lane or more).....	54
MULTI-LANE ROAD	In operation (dual two-lane).....	70
	In operation (dual carriageway).....	1 930
TWO LANE ROAD	In operation.....	2 397
E- ROAD	In operation.....	2352

(NOT INCLUDED IN TEM NETWORK)



TRANS-EUROPEAN NORTH-SOUTH MOTORWAY (TEM) NETWORK

TEM MASTER PLAN BACKBONE NETWORK

— TEM Master Plan backbone network

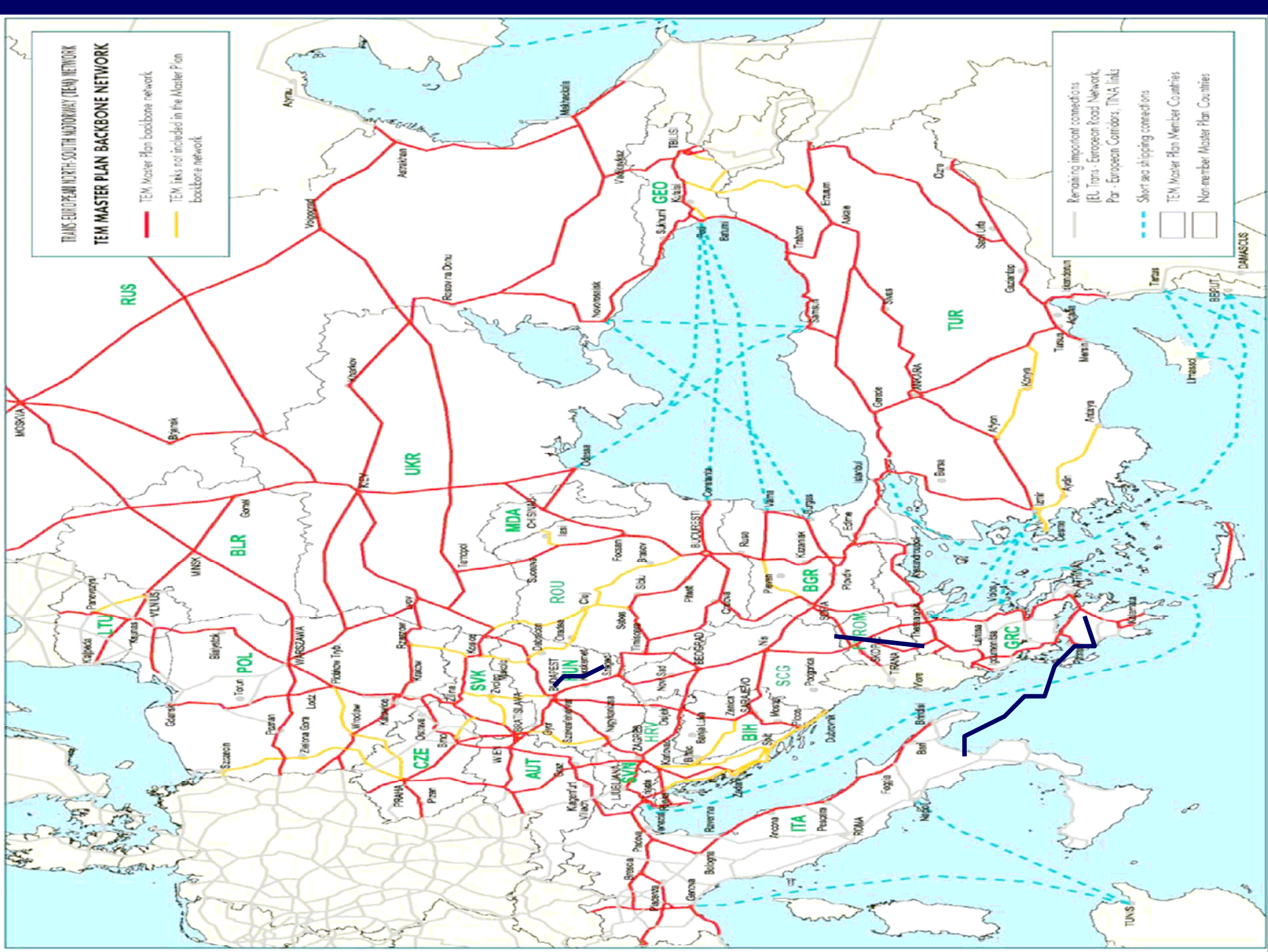
— TEM links not included in the Master Plan backbone network

— Remaining important connections (EU Trans-European Road Network, Pan-European Corridors, TINA links)

— Short sea shipping connections

□ TEM Master Plan Member Countries

□ Non-member Master Plan Countries





## IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

According to the results of the evaluation methodology utilizing Multi-Criteria Analysis suggested by the consultant, Turkey identified 20 TEM Projects of a total implementation cost of **3.123,7 million Euros**. Out of 20 projects, 16 belong to priority category I and their implementation cost is **1.544,48 million Euros**. 4 belong to priority category II and their implementation cost is **1.579,98 million Euros**. These 20 projects are on the following corridors;

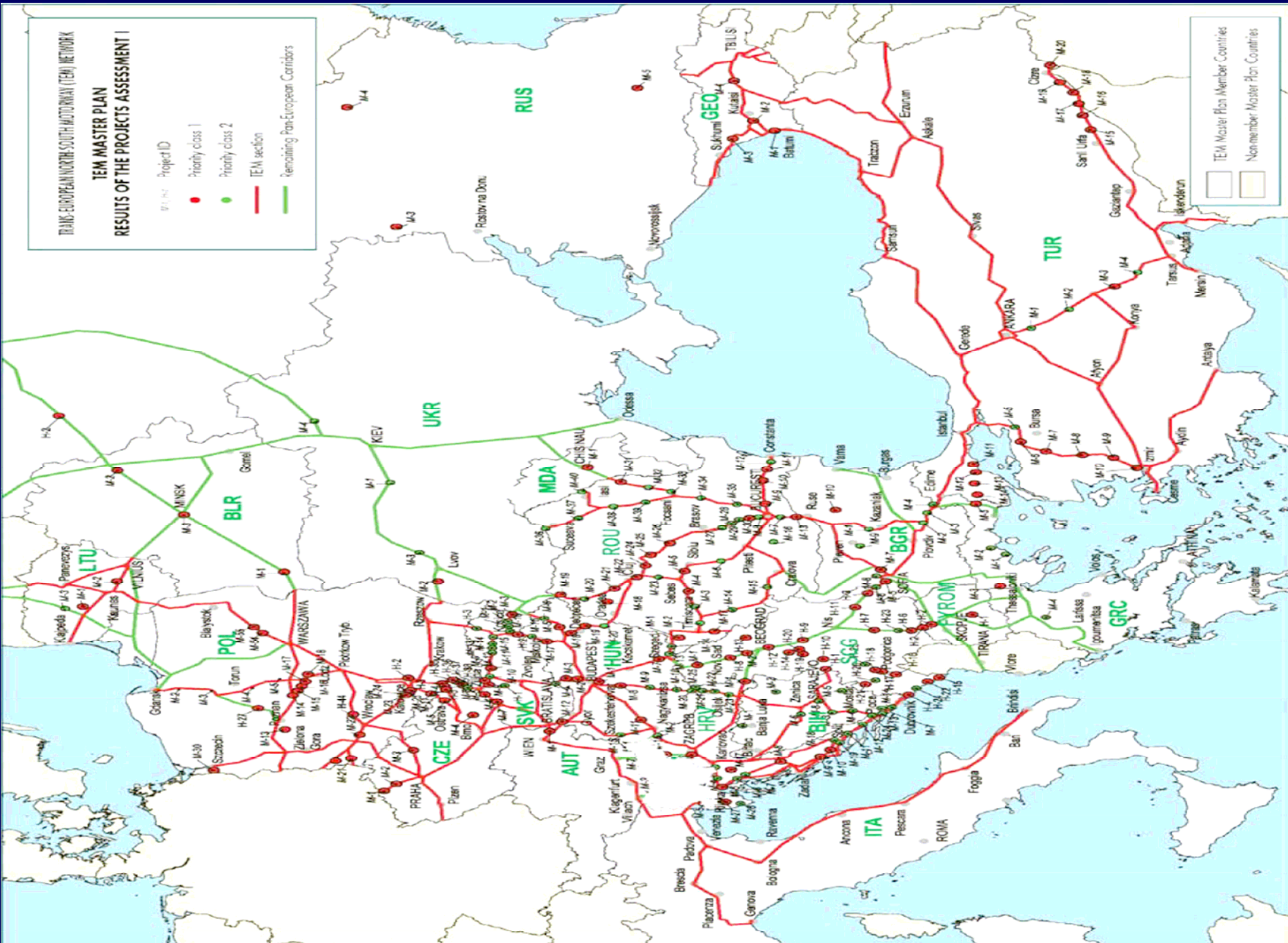
- İpsala Border Gate-Kınalı Junction State Road (4)
- Şanlıurfa-Silopi State Road (6)
- Ankara-Pozantı Motorway (4)
- Orhangazi-İzmir Motorway (6)

### TEM MASTER PLAN

### RESULTS OF THE PROJECTS ASSESSMENT I

- Project ID
- Priority class 1
- Priority class 2
- TEM section
- Remaining Pan-European Corridors

- TEM Master Plan Member Countries
- Non-member Master Plan Countries







# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY



## TURKEY TEMSTAT & E- ROAD MAP

- |                        |  |  |
|------------------------|--|--|
| <b>MOTORWAY</b>        |  | In operation (dual two-lane) (2x2)           |
|                        |  | In operation (dual three-lane (2x3) or more) |
|                        |  | Under construction                           |
|                        |  | Programmed or planned                        |
| <b>EXPRESSWAY</b>      |  | In operation (dual three-lane or more)       |
|                        |  | In operation (dual two-lane)                 |
| <b>MULTI-LANE ROAD</b> |  | In operation (dual carriageway)              |
|                        |  | Under construction (dual carriageway)        |
|                        |  | Programmed or planned (dual carriageway)     |
| <b>TWO LANE ROAD</b>   |  | In operation                                 |
| <b>E- ROAD</b>         |  | In operation                                 |

(NOT INCLUDED IN TEM NETWORK)

GENERAL DIRECTORATE OF TURKISH HIGHWAYS  
PLANNING DEPARTMENT  
01.01.2005



## **IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY**

### **KINALI JUNC.-TEKİRDAĞ-İPSALA STATE ROAD PROJECT**

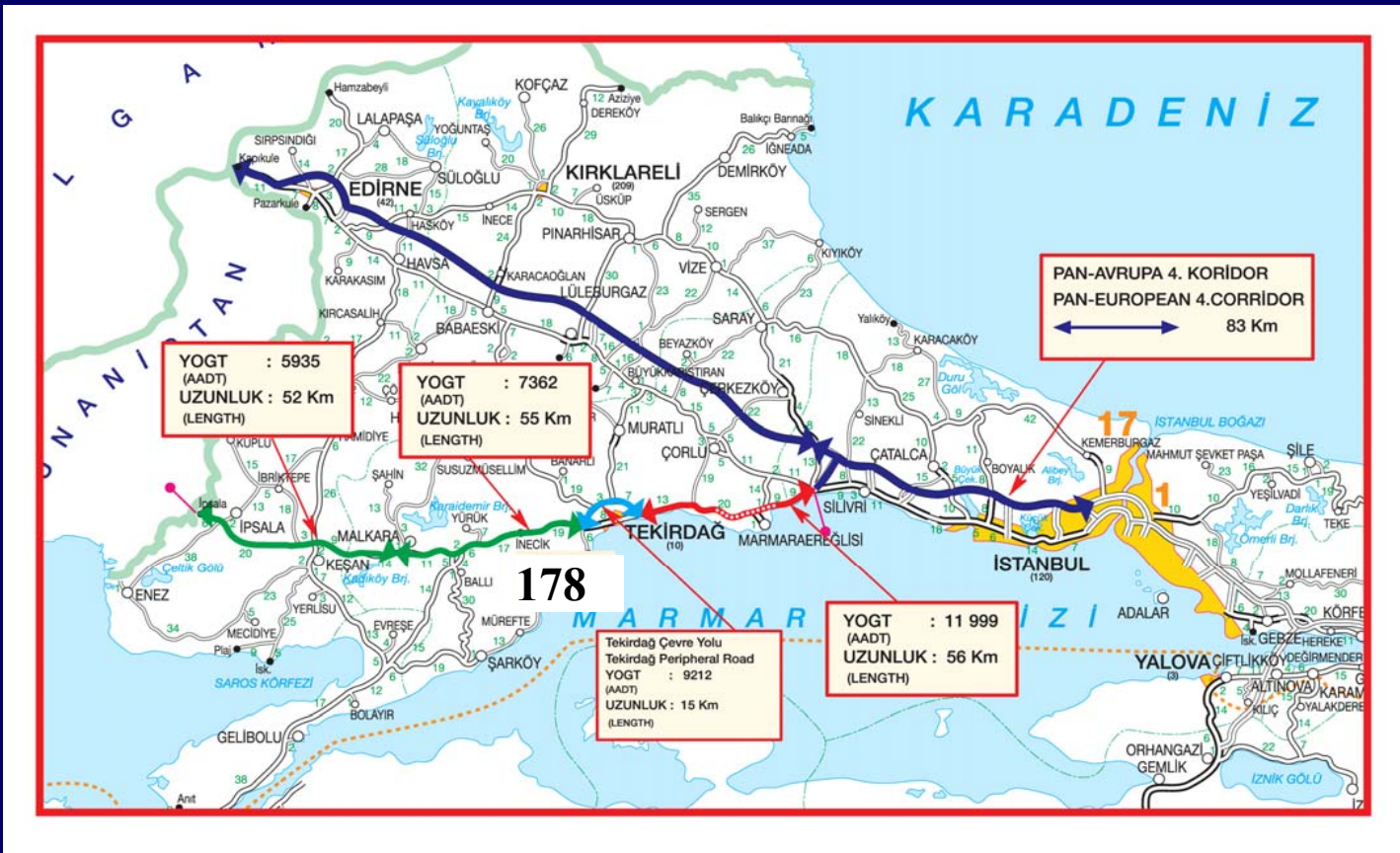
- **This project provides road link between Turkey and Greece. It constitutes the part of Thessaloniki - Istanbul European Corridor , E-90 & E-84 of AGR Network and Euro-Asian Road Links, passing through Turkish Territory. This corridor is connected to Pan European corridor IV at Kinalı junction.**
- **Current road projects on this state road corridor involve the upgrading one carriageway road to divided two lane dual carriageway and the construction of 15 km Tekirdag ring road (totally 178 km).**
- **Benefits to road users :**
  - **Improved safety by reducing the risk of traffic accidents**
  - **Reduction in Vehicle Operating Cost**
  - **Less journey time**





# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

## KINALI JUNC.-TEKİRDAĞ-İPSALA STATE ROAD PROJECT





## **IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY**

### **KINALI JUNC.-TEKİRDAĞ-İPSALA STATE ROAD PROJECT**

- **Total projects cost is approximately 189.36 Million Euro.**
- **IRR of the project has a average value of % 16**
- **Out of 178 km, a section of 163 km in length with single carriageway has been replaced to dual two lane carriageway with surface treatment.**
- **Remaining works:**
  - **Repavement with asphaltic concrete**
  - **Improvement of at-grade intersections into grade seperated intersections to provide limited access control.**
  - **Construction of Tekirdağ Bypass (15 Km)**



# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

## Kınalı Junction – Tekirdag

No.	Type	Criterion	Data
1	Project identification	Project Master Plan ID	TU-M-11
2		Master Plan priority (category/class)	(II / 1)
3		Project identification (from/to)	Tekirdag - Kinali Junction
4	Project description	Road type(Present / Future)	Highway/Highway
5		Nature of project	Upgrade
6		Toll collection type (present/future)	(None/None)
7		Project length in km	56
8		No. of lanes (present/future)	(2X1 / 2X2)
9		Year of start-completion (MP/actual)	(2004-2007/2004-2009)
10	Traffic volumes	AADT (MP (2002)/2006 census)	(12 588 / 11 999)
11		% of trucks and buses 2006 (MP/census)	(25 / 22)
12		AADT in 2010 (MP/2010 forecast)	(20 530 / 16 408)
13		% of trucks and buses 2010 (MP/forecast)	( 21 / 20 )
14	Funding & Economy	IRR (%) (MP/actual)	(12,96 / 12,96 )
15		Total project cost (mill.euro) (MP/actual)	(106,90 / 106,90 )
16		Project funding- % secured (MP/actual)	( 100 /100)
17		Funding source(s) (MP/actual)	(NB / NB )





## **IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY**

# **ŞANLIURFA- SİLOPI STATE ROAD PROJECT**

- **The Şanlıurfa-Silopi State Road is a west-east interregional route of strategic importance connecting Southeastern Anatolia to Mediterranean and Central Anatolia as well as Middle East countries, through Turkish-Iraq Border Gate (Habur).**
- **The Şanlıurfa-Silopi Road also constitutes a significant road section of E Road Network, designated as E-90, having a total length of 1900 km within Turkish territory.**



## **IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY**

### **ŞANLIURFA- SİLOPI STATE ROAD PROJECT**

- **Şanlıurfa-Silopi State Road Project that has a length of 351 km involves the upgrading of the existing single carriageway to dual two lane carriageway by following the existing alignment.**
- **All section excluding a section of 50 km in length that will have a rigid pavement will be paved by asphaltic concrete.**
- **The construction contracts of all subsections were awarded to various contractors and works started in 2005.**
- **The project is planned to be completed until 2010. It has been financed by National Budget.**
- **Total project cost is 272 Million Euro**



## IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

### ŞANLIURFA- SİLOPİ STATE ROAD PROJECT

	<b>Length (Km)</b>	<b>Realization (%)</b>
<b>Şanlıurfa-Viranşehir</b>	<b>91</b>	<b>37</b>
<b>Viranşehir-Kızıltepe</b>	<b>72</b>	<b>38</b>
<b>Kızıltepe-Nusaybin Junction</b>	<b>56</b>	<b>31</b>
<b>Nusaybin Junction-Oyalı Junction</b>	<b>100</b>	<b>60</b>
<b>Oyalı Junction – Cizre</b>	<b>52</b>	<b>38</b>
<b>Cizre-Silopi</b>	<b>32</b>	<b>23</b>



# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

## Şanlıurfa-Viranşehir

No.	Type	Criterion	Data
1	Project identification	Project Master Plan ID	TU-M-15
2		Master Plan priority (category/class)	(I /1)
3		Project identification (from/to)	Şanlıurfa - Viranşehir
4	Project description	Road type(Present / Future)	Highway/Highway
5		Nature of project	Upgrade
6		Toll collection type (present/future)	(None/None)
7		Project length in km	91
8		No. of lanes (present/future)	(2X1 / 2X2)
9		Year of start-completion (MP/actual)	(2004-2008/2004-2008)
10	Traffic volumes	AADT (MP(2002)/ 2006 census)	(6 550 / 3914)
11		% of trucks and buses 2006 (MP/census)	(41 / 53)
12		AADT in 2010 (MP/2010 forecast)	(9 865 / 4 777)
13		% of trucks and buses 2010 (MP/forecast)	( 37 / 51 )
14	Funding & Economy	IRR (%) (MP/actual)	(12,58 / 12,58 )
15		Total project cost (mill.euro) (MP/actual)	(68,09 / 68,09 )
16		Project funding- % secured (MP/actual)	( 100 /100)
17		Funding source(s) (MP/actual)	(NB / NB )



## **IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY**

# **ORHANGAZI- İZMİR MOTORWAY PROJECT**

- **This motorway project with a length of 368 Km, connects Marmara region, the most industrial part of Turkey, to Eagean and Mediterranean regions in the north-south direction. Thus, the biggest commercial center, Istanbul will be linked to International Port of İzmir, the third highest populated city.**
- **Traffic flow on this route ranges from 12500 to 30 000 in terms of total Annual Average Daily Traffic (Car, Bus, Truck, Articulated Truck), of which up to 35 are heavy good vehicles.**
- **It will have motorway standards with three lane in each direction**



## IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

# ORHANGAZI- İZMİR MOTORWAY PROJECT

- The project has been divided into six homogenous sections.
- Orhangazi – Bursa ( 33.6 Km)
- (Bursa- Karacabey )Junction - Susurluk ( 63.4 Km)
- Susurluk – (Balıkesir –Edremit )Junction ( 62 Km)
- (Balıkesir-Edremit )Junction – Kırkagac ( 65.2 Km)
- Kırkagac – Manisa ( 52.1 Km )
- Manisa- İzmir ( 56 Km)





## **IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY**

### **ORHANGAZI- İZMİR MOTORWAY PROJECT**

- **Bursa Peripheral Road construction on this axes has already been completed and opened to traffic.**
- **Orhangazi-İzmir Road Design works have been recently completed.**
- **Project funding has not been yet secured. One strong option for financing of the project is BOT model.**
- **It is is planned to be completed until 2015.**
- **The construction cost of the project is approxiamately 1,141 Billion Euro**

# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

## Orhangazi – Bursa

No.	Type	Criterion	Data
1	Project identification	Project Master Plan ID	TU-M-5
2		Master Plan priority (category/class)	(II / 2)
3		Project identification (from/to)	Orhangazi - Bursa
4	Project description	Road type(Present / Future)	Highway/Motorway
5		Nature of project	New
6		Toll collection type (present/future)	(None/Toll)
7		Project length in km	33,6
8		No. of lanes (present/future)	(2X2 / 2X3)
9		Year of start-completion (MP/actual)	(2015-2019 / 2010-2015)
10	Traffic volumes	AADT (MP(2002)/2006 census)	(23 233 / 29 949)
11		% of trucks and buses 2006 (MP/census)	(41 / 35)
12		AADT in 2010 (MP/2010 forecast)	(34 838 / 38 925)
13		% of trucks and buses 2010 (MP/forecast)	( 28 / 35 )
14	Funding & Economy	IRR (%) (MP/actual)	(15,57 / 15,57 )
15		Total project cost (mill.euro) (MP/actual)	(281,87 / 281,87 )
16		Project funding- % secured (MP/actual)	( 0 / 0 )
17		Funding source(s) (MP/actual)	( 0 / 0 )



## **IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY**

### **ANKARA-POZANTI MOTORWAY PROJECT**

- **Ankara-Pozanti Motorway project is a north-south interregional route of strategic importance connecting Ankara in the north, located at central anatolia, and Mediteranian Region. This road section constitutes a significant part of E-90, providing road linkages of Europe to Middle Eastern Countries**
- **The length of the project is 366 km**
- **It will have a motorway standards with 3 lanes in each direction**
- **Traffic volume on the route amounts to total 15000 AADT .**



## IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

# ANKARA-POZANTI MOTORWAY PROJECT

**Ankara-Pozantı Motorway Project consist of four sections;**

- **Ankara-Acıkuyu (101 km)**
- **Acıkuyu-Ortaköy (78 km)**
- **Ortaköy-Gölcük (93 km)**
- **Gölcük-Pozantı (94 km)**



## **IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY**

### **ANKARA-POZANTI MOTORWAY PROJECT**

- **Construction works of Gölcük-Pozantı section has been commenced. Physical realization is approximately 35 %**
- **Funding of Ankara-Gölcük section with a length of 272 km of the motorway has not been yet secured.**
- **Ankara-Pozantı Motorway project is planned to be completed until 2015.**
- **The construction cost of the project is approximately 1,521 billion Euro**





# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

## Ankara-Acikuyu

No.	Type	Criterion	Data
1	Project identification	Project Master Plan ID	TU-M-1
2		Master Plan priority (category/class)	(II / 2)
3		Project identification (from/to)	Ankara - Acikuyu
4	Project description	Road type(Present / Future)	Highway/Motorway
5		Nature of project	New
6		Toll collection type (present/future)	(None/Toll)
7		Project length in km	112
8		No. of lanes (present/future)	(2X2 / 2X3)
9		Year of start-completion (MP/actual)	(2015-2019 / 2010-2015)
10	Traffic volumes	AADT (MP(2002)/2006 census)	(9 080 / 11 838)
11		% of trucks and buses 2006 (MP/census)	(48 / 42)
12		AADT in 2010 (MP/2010 forecast)	(22 653 / 13 715)
13		% of trucks and buses 2010 (MP/forecast)	(47 / 41 )
14	Funding & Economy	IRR (%) (MP/actual)	(16,83 / 16,83 )
15		Total project cost (mill.euro) (MP/actual)	(294,84 / 294,84 )
16		Project funding- % secured (MP/actual)	( 0 / 0)
17		Funding source(s) (MP/actual)	( 0 / 0)

# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY & E ROAD NETWORK



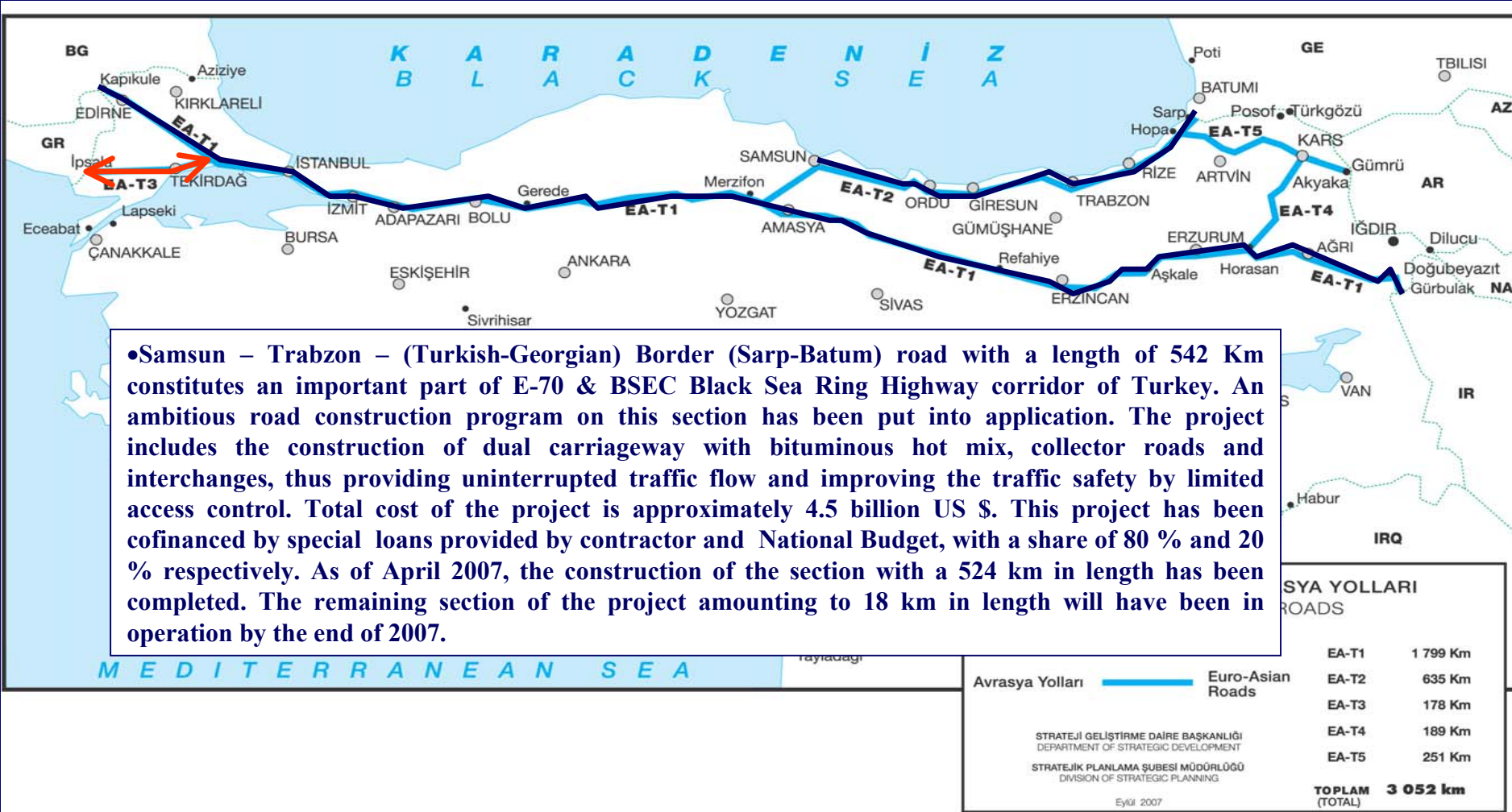
E YOLLARI E ROADS IN TURKEY	
E-70	530 km
E-80	1 799 km
E-84	146 km
E-87	1 094 km
E-88	589 km
E-89	134 km
E-90	1 900 km
E-91	194 km
E-95	107 km
E-96	435 km
E-97	249 km
E-98	56 km
E-99	807 km
E-691	275 km
E-881	563 km
<b>TOPLAM (TOTAL)</b>	<b>8 878 km</b>

STRATEJİ GELİŞTİRME DAİRE BAŞKANLIĞI  
DEPARTMENT OF STRATEGIC DEVELOPMENT  
STRATEJİK PLANLAMA ŞUBESİ MÜDÜRLÜĞÜ  
DIVISION OF STRATEGIC PLANNING

Aralık 2006



# IMPLEMENTATION OF TEM MASTER PLAN & EURO-ASIAN ROAD LINKS IN TURKEY



**Total length of Euro Asian Road links passing through Turkey amounts to 3052 km.**







# IMPLEMENTATION OF TEM MASTER PLAN IN TURKEY

**THANK YOU VERY MUCH  
FOR YOUR ATTENTION**

MÜCAHİT ARMAN

GENERAL DIRECTORATE OF TURKISH HIGHWAYS

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