BJD Turkey

Newsletter

May 2004

Breaking News… Breaking News…

Turkish Foundation of Traffic Accidents is a Participating Organization

The president of *Turkish Foundation of Traffic Accidents,* Professor Rıdvan Ege, signed the declaration of support on March 26, 2004. He kindly wrote the following detailed report on TRAFFIC PROBLEMS IN THE WORLD AND IN TURKEY.

TRAFFIC PROBLEMS IN THE WORLD AND IN TURKEY

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Introduction

For the last 25-30 years people's aping to move out of city, taking out the city the small and the common industrial centers and establishing the heavy industry far from the city increased mass transportation. The number of trucks, buses, lorries and minibuses increased. This increase varies according to economic, social, agricultural and industrial states and needs of each country. Thus, (in traffic and in transportation) every country could have differences in their local and private regulations. But, as an effect to accidents, the three factors other than the driver and the vehicle, are the road, traveler in the very vehicle and pedestrians which make up the Environmental factors.

In parallel to the rapid improvement in civilization and technique, need for speed flourished and as a result vehicles with high speed came into our lives increasing the number of cars. Although vehicles with increasing speed and number are part of our lives they also gave an end to others' lives or permanently disabled them or brought financial burden. According to the statistics, among the reasons for fatal accidents can be placed in the second right after child death. Traffic accidents in other countries make up 30% of the accidents. However, in our country it rates up to 50%.

History

Since the dawn of time, people either used their feet or animals as a means of transportation. The invention of the wheel in 2000 B.C., three-wheeled vehicles in 200 B.C. and the invention of chariots by the Romans are the milestones of overland transportation. In the following centuries, vehicles with pedals and with gears were invented.

In 1771, Cognate, in Paris, developed a three-wheeled steamed vehicle. 208 years ago, in 1796, the first self-operating steam vehicle had been tried overland.

In 1821, Griffilt, an Englishman, developed a mail steamer and in the same year the first fatal accident was caused by a fire extinguisher.

Since 1908, speed race began on the roads. In 1909, Wenarzy achieved a speed of 200 km/hr, . In 1933, Malecomb had reached in 1947, John Cobb achieved 800km/hr. Because of the increase in traffic accidents caused by these speed cars, each country began to develop new means of traffic safety rules.

In 1966, the first local car ‘Anadol’ had been produced in Turkey.

The first vehicles were operated on steam, and later with fuel and fuel oil, and finally liquid gas began to be used. It is being discussed today whether electrical or solar energy should be used in operating the cars. In the beginning of the present century, there was a great race of trying to make the fastest (speedy) car, but today, we witness the efforts to make the utmost traffic safety and to stabilise the reduction in the cost of vehicles.

In 1894, a vehicle travelling from Paris to Rouin reached up to a speed of 21 km/hr. In 1901, the speed for the same route was 74 km/hr and in 1903, it was 103 km/hr.

Norway, in 1936, when the alcohol level drunken increased, directly proportionally to the rates of injuries and death, restricted the maximum alcohol level in blood by 0.05% to 10.50% promille.

In 1970, it was made obligatory to use seat belts in Australia.

I expounded and presented for the first time in 1962 at the Turkish National Medical Congress that traffic accidents brought about great harm to Turkey. By scrutinizing 8.166-traffic accidents with the men of law, engineers, and managers in 1964, I published a 264- page report compiled in a book form, which proposes taking the necessary measures in diminishing the traffic accidents, and I presented a report to the government.

In 1983, for safety reasons, Turkey restricted to maximum alcohol level in blood by 0.50 promille. I think, I was effectual in this as the board-member, and president of the Foundation for Traffic Accidents and the International Association of Accidents and Traffic Medicine.

In Turkey, as a result of my persistent applications, and Strivings. From 1985 onwards, the use of seat belts were first made compulsory intercities and then in 1991 in the cities. In the process of putting these into practice, first the Minister of Interior of the period , Yıldırım Akubulut, second prime-minister of the time, Mesut Yılmaz had their supports.

Although legal restrictions were given a start in 1930 in Turkey, the regulations applied in the United States were widely spread out in all the states in the year 1982.

Traffic Police Department in Turkey was first established in 1953 and in 1983. With our participation and recommendation Overland Traffic Law No. 2918 has been prepared and begun to be effective from 18.10.1983 to date. In this context, the president of the period, Kenan Evren, and prime-minister of the time, Bülent Ulusu had their supports, and help without any hesitation.

Traffic Accidents in Different Countries

While the world is approaching to the space-age, it seems that here will be more secure and wider roads. However, there will be faster cars and uncontrolled drivers as a consequence.

In most of the countries, transportation on the roads plays an important role.

The proportion for the usage of roads, railways, maritime ways and airways in some countries:

Table-I

Countries	Roads%	Railway%	Maritime Way %	Airway%
USA	**27.2**	**38.3**	**24**	**10.5**
Germany	**58.2**	**22**	**12**	**7.3**
Turkey	**95**	**4**	**0.8**	**0.2**

In Turkey, 95% of passenger transportation and 91% of good transportation are provided by means of roads.

Countries may be divided into developed, developing and undeveloped contries in terms of economical and, social aspects as well as other characteristics: this is relative to the commentators perception. However, this is a bit different in traffic. In the first group lies the population, which increases the accident, the numbers of vehicles and drivers, and the length of the roads as factors (Table-I).

The number of vehicles responsible for accidents in Turkey is about the number of drivers which is 15.285.187 in 2002, and the number of population is 68.300.000.

In our country according to accidents in 2002 people were involved in an accident per day, about 258 were injured, 8 were dead on the site of the accident, were dead while being taken to the hospital or in the hospital. Pecuniary damage was about to take place. On one hand, every year 250.000-350.000 driving courses and again with their fatalism causing lack of inspection make up one of the most vital problems. Although, every earthquake in our country is recalled every day and never forgotten, sadly each accident occuring every day is never considered to be as important as an earthquake.

After comparing this diablo with Aids, Colera and any other similar diseases do we show the same sensibility while it is taking lives, injuring hundreds of peoples, leaving people disabled and actually killing them? For the sake of these people countries, establishments, governments, WHO, UNICEF or UN actually revolt for them. But, do we reflect the same sensibility to Traffic calamities? For the last 8-10 years the name of Traffic anarchy is renewed to Traffic Monster. But, this is all we have done since the numbers show that during these feight years accidents increased. There is no such thing as a monster, with the label "Wild Animal". We accused an innocent living thing and with the slogans "Don't be a Traffic Monster" we chose the cheapest and the easiest way to deal with it .Every day 20-21 people die and people get injured, but we still do not act accordingly and thus, we are the only ones to blame for these calamities. We will keep on distracting ourselves with similar slogans until we educate the assigned people and co-ordinate them, expecting everything to be done by the police instead of determining and co-ordinating the education, transportation, health, overland and traffic safety policy. How confusing it is to see how quick we forget the ones dying every day, how easily we turn a blind eye although we hear them wail. It is us who get hurt when we see on TV the people having accidents and it is against us who easily avoid it with a simple statement of an authorised person. Although each accident, again, lights the ashes buried within us, it soon passes.

TRAFFIC ACCIDENTS AND THEIR HARM

In view medicine, traffic accidents are an epidemiological event; that is, it is something which concerns everyone and it insidous. Every epidemiological event depends on 3 causes, factors or agents.

Instead of the numerical data of traffic accidents, injuries and mortalities, the proportion of injuries and mortalities to 100.000.000 Km driving, which is being used nowadays, has been demonstrated as follows.

Mortality rate of Per 100.000.000 vehicle (travel are between 0.3-1.9 deterioted in western countries, in Turkey is 6.5 in 2003 (It was 35 about 15 years ago)

Table-II

The rates of injuries and mortality Per 100.000.000 Vehicle/Travel in some countries:

Countries	Injury Per 100.000.00 Vehicle/Travel	Mortality Per 100.000.000 Vehicle/Travel
U.S.A	58	0.3
U.K.	60	1
Germany	351	1
Finland	226	1
Japan	111	1.4
France	27	1.9
Israel	86	2

Turkey	**108**	**6.5**
Armenia	**787**	**101**

The number of injured Per 100.000.000 vehicle/km is 27 in France, 60 in the United States of America and United Kingdom, whereas in Israel, it is 106, in Japan, it is 111, 226 in Finland, 351-787 in Germany and Armenia, and in Turkey, 108. (Table-III).

GENERAL EVALUTATION OF ACCIDENTS

Affecting traffic accidents as for driver, vehicle and environment (road, and pedestrian) is as follows. Our countruy's population is 68.300.000, overland length is 64.800 km, number of motorised vehicles is 9.500.235 and number of drivers is 15.286.825 (Table-III). As a result of 3 factors affecting traffic accidents, in 2002, 407.247 accidents occurred accordingly, 43.714 people were injured, 2885 people were dead at the site of accident. With 1550 deaths ocurring while the injured people are being taken to the hospitals, the total number of deaths summed up to 8000.

Table-III

Inerease of population, road length, number of the Cars, Drivers, Accidents and Dealths (Table-III)							
Years	**Populations-Million**	**Road Length Km**	**Number of**				
			Vehicle Million	**Driver Million**	**Accidents-Thousand**	**Injuries**	**Deaths On the Sceene of Accidents**
1960	27,8	26,711	0,124	0,215	8,136	7,729	1,596
1970	35,6	24,437	0,496	0,884	19,207	17,838	3,978
2002	67,8	64,800	9,500	15,285	407,247	93,714	2,885

Increase in the number of population, road, vehicles and drivers in the last 42 years**.**

In relation to traffic accidents, injuries and deaths, relevant roads, and vehicle in this country are 1-2, but in our country it is 6.5. It is obvious that with these statistics, accidents are 14-28 times, injuries 3-7 times, death 3-7 times more than these country's statistics.

I- EPIDEMIOLOGICAL FACTORS FOR AND ACCCIDENT ARE:

1. the Driver
2. the Vehicle
3. the Environment (road, pedestrian, passenger, meteorological and others)

1- Drivers:

We could simply summarise the driver's part in accidents in view of the:

1- Health conditions preventing the driver to drive. (diabetics, epilepsy, heart diseases, diseases preventing the movements of spine and etc. The neck, defect in shoulders, arms and legs, blind, deaf and people with physiological problems and defected psychic)
2- Misbehaviour of other drivers and passengers and conditions of their travel.
3- Any kind of taken medicine: especially sleeping pills, relievers (and medicine to prevent one self from falling into sleep and to stand long distance travel) including others should be prohibited. Because, even aspirin causes an unbalance within the system of the body.
4- Smoking a great deal and being present in a smoky place.
5- Alcohol, must not exceed any country's determined limits for its citizens.
6- Avoiding being tired, boredom and being under stress.
7- Meteorological conditions like hot, cold, dark, bright and stormy weather,
8- Technical conditions: frequent car break down, defects of engine, battery, brakes, lights, wheels, ventilation, doors etc.

One of the most important reasons for accidents in our country is the lack of supplying sufficient health conditions. But, another important matter is citizen's following the educational, cultural and social rules and faults in adapting them.

According to te Overland Law-2918 which came into force and effect in 1983 forced driving courses were establish by 74-110 hours to complete with traffic knowledge, first aid (14 hrs.), driving skills and also brought about obligatory exams by the Ministry of Education. When the law came into force and effect, the number of drivers rounded up to 3.198.492. At the end of 2002 this number raised up to 15.285.000. As a result, approximately (12 billions) of drivers took courses and graduated. Although Ministry of Education still could achieve the desired level of inspection, with the helped of these courses, graduation of trained drivers that was provided and so, help of these courses with graduation of trained drivers was provided and so, helped death and injury to decrease in parallel to the number of vehicle and driver.

Every kind of vehicle has its own speed limit both in or out of the city. For vans, minibuses, truck, buses and motorcycles it is 50km/hr in the city. However, in intercities, this is extended to 90 km/hr for cars, 80km/hr for buses and 50km/hr for motocycles. As the speed increases, the stopping of a vehicle also increases and causes accidents and deaths in accumulating proportions (Table-IV).

Table-IV Speed and braking Distance

Speed Per Km.	Cronaxi Distance (m)	Break Distance (m)	Stopping Distance (m)
20	**4**	**3**	**7**
30	**6**	**6**	**12**
40	**8**	**11**	**19**
50	**11**	**16**	**27**
60	**13**	**23**	**36**
70	**15**	**32**	**47**
80	**17**	**42**	**59**
90	**19**	**53**	**72**
100	**21**	**65**	**86**
120	**25**	**94**	**119**

As it is seen in Table III, the number of vehicles at the end of 2002 is 15.285.000. As there were 215.000 vehicles 42 yars ago, they increased 65.6 times more within 42 years.

In 1996 there were 9.396.177 vehicles (Tables III). In 1970, there were 124.000 vehicles, and this sum increased 79 times in vehicles (Table-III), 15.285.000 People, who can buy cars, are above the age of 18 which means one car for each 4.7 persons. Although, 330.000-470.000 new cars enter the traffic yearly, especially during the last few years, more than of half of the cars are older than 10 years.

From 9.396.177 vehicles out of 7.000.000 are for commercial purposes Table-V) 53.7% of the vehicles are automobiles. From the 5.102.377 automobiles (small cars), 57.2%, approximately 2 millions are in Ankara and Istanbul and about 5 millions are private cars and about 4.5 millions of the vehicles are commercial automobiles. The percentage of accident, injury and death cases caused by taxis are 55%, 51% and 48%.

Table-V

	Number	Mortalite after car accidents
Car	5.102.377	53,4
Bus	153.687	1,6
Track	576.781	6,0
Van	970.252	10,1

Minibus	311.991	3,3
Jeep	54.463	0,6
Tractor	1.180.127	12,3
Motocyle.	1.046.499	11,0
Total Numbers	9,560,235	

1.8% of the vehicles, are 153.687, percentage of 23.5% in injury and 16.2% in death cases.

31.991 minibuses (3.3%) have a percentage 5% each in accidents and injuries, and 4.2% in death cases. It is clearly seen that it is mostly commercial-purposed vehicles, such as buses, minibuses, trucks and vans (23% of all vehicles) that cause 32%-36% of the accidents and injuries, and 24.4% of the death cases.

There are reasons for these faults. On one hand these drivers may be driving for a long time (sometimes all day), and on the other hand they usually carry a large number of people. Another factor is that drivers (Especially truck and van drivers) who come form the country, and whom their education and city culture are weaker cause these accidents.

Because the numbers of buses, and tracks are high in Turkey, the rates of accidents and deaths are higher in our country than the others. The reason for this is that 91%-94% of transportation is being held by the roads.

III Enviromentall Factors

There are 4 subgroups :
Road (III/1),
Pedestrians (III/2),
Passenger, (III/3),
Meteorological Factors (III/4)

III/1 Roads

There are 64.800 km of roads in Turkey about 1.500 km of it is tollrood and about 1.500 km of it is double road. For the last 15 years, roads were being constructed, highways and existing roads were being converted into two way lanes, new reforms were being arranged for traffic security and capacity, and there were projects to straighten the physical and geometrical standards of the existing roads.

According to statistical data, in 2000 the fault of roads in traffic accident was shown as 1% in Turkey. Great Britain, which has the safest roads in the world, has a 20% of fault in its roads, which shows that the percentage shown above has no reliability. As I had mentioned before, since the traffic police who make the written report do not generally consider the roads' conditions or fault, generally puts the blame on the driver, pedestrian, etc.. Therefore, the results that appear in statistics is as above faulty.

Major physical reasons for the pedestrian dispersions are insufficient number of playgrounds, inadequate passage ways and pavements for the pedestrians or cars parking on (insufficient) pavements. On the other hand, people lack the knowledge of maneuver of cars and their distance of stopping after braking. As previously mentioned (Table-IV), a car with a speed of 50 km/hr can only stop, even its dry weather, at a distance of 26-30 meters. On wet surfaces the distance goes up to 38-40 meters. During this 2-3 seconds of time, walker can get injured or not, but for the children this could be deadly.

In the traffic accident-reports, policemen and gendarmerie-constabulary have not evaluated the accidents in relation to motor-ways, roads, pedestrians, passengers, and meteorological factors. According to police-reports, 90%-95% rate drivers are charged with the responsibility of involving in

accidents, and the defects of cars, roads, pedestrians, and meteorological factors have been reduced to 5%. Of course, the statistics are not plausible at all.

The role of the drivers the (numbers of and, increase in accidents) in evaluating accidents (1) is very high as the types of the vehicles in number, and the annual increase-rates. Vehicle types (car, bus, van etc.), and their roles in accidents, such as technical construction and setting in motion problems (2) and Environmental factor (3). We have taken up (road-length, type, and geometric and physical traits) condition under three headings. Now, we will take up how to decrease the number of accidents, and how to attain a traffic transportation, without any hazard, through (4 E: 1.Education, 2. Enforcement, 2- Engineering and 4. Emergency-Care Treatment). In order to diminish the problems in the fulfilling of four groups that play roles in accidents in Turkey, 1983 and 1999 Highway-Road Legislation ve Regulations have been altered and enacted twice.

When I applied to President Kenan Evren and prime-minister Bülent Ulusoy in 1982 for several occasions in the founding committe; a commission was established which over-worked for months to enact the 2918th Highway-Road Legislation on 18.10.1983. In preparation of this legislation, it can be said that I contributed efforts as a traffic proletarian-volunteer. The prominent reformations that are culminated on this are as follows.

The Factors the Decreasing the Traffic Accidents and Injuries

Now I will try to explain to you our proposals in order the decrease the number of traffic accidents in the developing countries to the 4 E system, which is composed of:

1- Education,
2- Enforcement,
3- Engineering,
4- Emergency Care and First Aid.

1. *EDUCATION*:

A. Driver's Education and Training

1. Candidates for driving licenses:

a) Must be at least a primary school graduates (8 years) for Commercial Cars, must be High School graduated, for trucks.

b) Must attend compulsory traffic courses (74-110 hours, at least 14 hours for first aid).

2. There are additional courses for professional drivers (for van, bus, truck drivers)
3. Traffic teachers' programme will be organised.

B. Education for People

1. Compulsory traffic safety and first aid courses (during primary and high school)
2. Compulsory traffic programmes (on televisions and radios; daily and weekly)
3. Non-Profit Volunteer associations and foundations (prepare educational films, video, poster, billboard programmes, conferences and seminars)
4. National Safety Council consists of universities, academicians and educationalists
5. Training traffic parks for children should be built

2. *ENFORCEMENT*:

1. Efforts to increase the education level (high schools), modernised equipment and the numbers of traffic polices (at present 22.200 Traffic polices, 7.560 gendarmeries and 2.500 volunter civil traffic inspectors) are still being continued.

2. There has been an increase in traffic fines (between 40-150 $) and honorary traffic inspectors have been put into service.

3. Under the presidency of prime minister, a High Traffic Committee has been established with 8 ministries, 3 general directors, and a Traffic Safety Committee has been established by the representatives of 8 ministries, Chief of the Police Head Quarter, and gendarmerie Head Quarter.Traffic Police Department must be a separete force.

4. Road Safety Council must be under the presidency of one of the Vice President of National Police Headquarter (universities, related official departments, Jandarmary officer, associations and foundation representatives)

5. Traffic laws and regulations must be up-to date, short and clear. (Fines must be efficient and be increased every year according to specific indexes-especially in the countries where rate of inflation is over 10%)

6. The number of traffic policemen and gendarmeries, and necessary tools and equipment for training and regular traffic control must be defined according to international standards. Every country must adopt these standards with some slight changes peculiar to the situations of their countries.

7. Volunteer Traffic Inspector System will be established.

8. The limitation of alcohol must be minimised (as 0.50 promile). There must be free alcometres in the big restaurants and hotels as well as in the roadside gas stations.

9. The use of safety belts must be compulsory and controlled by traffic policemen regularly whether they are used by drivers or not. Safety belts should also be compulsory for busses and mini-buses.

10. The rate of fines must be increased in the cases when drivers repeat exceeding the alcohol limitation and do not use safety belts more than twice. Such drivers should be sent to the prison and have psychological tests.

11. Traffic controls must be done regularly (Traffic policemen sholud not do subjective justice)

***3.ENGINEERING*:**

A. Cars:

1. As it well known, the bodies, brakes, tires (tubeless), wipers and safety belts of small vehicles (private or taxi) must be very secure, safe and cheap. (The manufacturing of unsecured and cheap cars in developing countries must be banned). The traffic inspection of all types of vehicles, and over-weight transportation should be inspected investigated inroutine intervals.

2. Speed limit: Although drivers are legally allowed to drive at 90 km. (Max:100 km) Per hour all over the world, many automobile fims provoke drivers by manufacturing cars that supply drivers with the speed of 200-300 km, Why?

3. There must be a legislation for the yearly periodic inspection (engineering, lights, brakes, wipers, safety belts, first aid boxes)

B. Transportation Road Construction Maintenance and Rehabilitation:

1. Roads with double lines should be constructed separetly. Roads' signalling and care should be maintained regularly and punctually.

2. Non-stop express ways (autobahns) should be constructed only between a few significant cities or big cities.

3. Load of vehicles must be controlled by mobile units and the overloaded ones should be banned from traffic.

4. Railways and maritime lines should be used in the transportation of people and goods as much as possible.

5.

4. EMERGENCY CARE AND FIRST AID

1. Driver candidates must have undergone psychological tests and general health check-up (by internal medicine, ophthalmologist, psychiatrist, orthopaedist, ENT specialists)

2. Every driver candidate must have first aid courses.

3. Nation-wide emergency care and first aid opportunities should be provided and fitted to international standards (courses, first aid stations, emergency centers, ambulance and dispatch system).

4. Emergency Medical Technicians (EMT) and paramedics should attend 6-12 months courses (Ambulance Service and Hospitals' Emergency Care Units).

5. Every country should have universal phone numbers for emergency phone calls (111, 555, 999). There should be a command office policemen, ambulance team, dispatch and emergency medical centers.

6. For the ones who exceed the alcohol and speed limit for three times, psychological and psychiatric tests must be applied other than imprisonment and banning from traffic.

7. Every country must have information on traffic offence and health record belonging to drivers on computers (such as exceeding alcohol and speed limit, and those driving without safety belts).

In 1983, I petitioned to respectable President Kenan Evren for the Traffic regulation of the legislation in actual practice. Mehmet Aydın, the Minister of Health of the period, helped for the ambulance and First Aid (Hızır Acil: Swift Emergency) system: for the first time, six ambulances were bought in 1983.

In the very severe traffic accident, which the sister of Veysel Atasoy the Minister of Transportation of the period had undergone, whom I had operated on her two legs, Mr. Atasoy and I had been friends.

He himself, in collaboration with Servet Bilir, had constructed traffic-emergency kiosks to phone newly built Hızır Acil (Swift-Emergency) on the Gas Stations on the intercity Highway with free of charge phone call, but then transformed into phone number: 112 to inform the accidents and emergency problems.

The Minister of Interior of the epoch, Selahattin Çetiner initiated the traffic-security services from 1972 onwards, by increasing the numbers of traffic policemen, education and training facilities, and the tools and implements related to this. His venerable wife, Güler, also worked in our Foundation For Traffic Accidents.

In order to present the shortcomings in the Highway Road Traffic Legislation to the government, I applied to prime minister Mesut Yılmaz in 1990, and upon this Traffic Council was held in which although the foundation of Highway Road Services Directorate was proposed to be founded, and was fully assented by the governmental body, this did not come to materialise when the government resigned!

Conclusion

As it is obviously observed, the services except Engineering, which are Education, Enforcement and Emergency care, must be practised according to socia-economic and cultural situations of each country. However, in addition to all developing countries we should work in co-operation with SICOT (Societe Internationale de Chirurgie Orthopadique et de Traumatologie), WHO (World Health Organization), LTN (United Nations), and IAATM (International Association for Accidents and Traffic Medicine). And flose countries should attend traffic master

programmes such as birth control and infectious diseases like AIDS. In this aspects, we as IAATM, should work in co-operation with SICOT.