



United Nations Economic Commission for Europe

Improving Global Road Safety: setting regional and national road traffic casualty reduction targets

Project funded by the United Nations Development Account (UNDA)



**Summary report on the implementation of the project
“Improving Global Road Safety: setting regional and
national road traffic casualty reduction targets”,
funded by the United Nations Development Account**

October 2009

SECTION 1: INTRODUCTION AND BACKGROUND

1.1 Background

Road crashes claim the lives of more than 1.3 million people and at least 50 million people are injured on the roads every year. Developing countries and economies in transition bear the majority of this burden so that road traffic crashes are a development issue that disproportionately affects the poor in low and middle-income countries. For instance when a family's breadwinner is killed or disabled in a road crash the whole family may be impoverished. Road crashes typically account for 1 to 3 per cent of a country's GDP.

The growing burden of road crashes has increasingly been recognised, and in 2004 WHO and the World Bank published the first World Report on Road Injury Prevention (WHO 2004). The need for action to improve global road safety was recognised in the UN General Assembly Resolutions 58/289 of April 2004, 60/5 of October 2005, and 62/244 of March 2008.

In particular, Resolution 60/5 strengthens the mandate for UN regional commissions and agencies to take forward action on road safety, and 62/244 invites "all Member states to participate in the projects to be implemented by the United Nations regional commissions to assist low- and middle-income countries in setting their own national road traffic casualty reduction targets, as well as regional targets."

The project "Improving global road safety: setting regional and national road traffic casualty reduction targets" to which the resolution refers is funded by the United Nations Development Account (UNDA) (5th tranche) for the period March 2008 to December 2009. It recognises the value of targets in improving road safety and was set up to assist governments in low and middle income countries to develop regional and national road safety targets and to exchange experiences on good practices for achieving these targets by 2015. This report describes the objectives of the project, its regional activities, and the key issues for the successful setting and achievement of road safety targets. It has been commissioned by the United Nations Economic Commission for Europe (UNECE); additional funding was kindly provided by gTKP.

Promotion of road safety targets was the chosen topic for the UNDA project in the light of the successful results achieved by countries that have used targets as part of an effective road safety strategy. There is growing recognition globally of the potential for targets at regional or national level to give impetus to the greatly increased level of road safety activity that is needed over the next decade if the current worsening trends in road crash casualties are to be arrested and reversed.

The following section discusses how targets can contribute to making the world's roads safer in the decade of action for global road safety that will be discussed at the First Global Ministerial Conference on Road Safety in Moscow in November 2009. This Summary Report of the project will be communicated to the Conference.

1.2 Objectives and rationale for the project

Road safety performance is improved through setting ambitious casualty reduction targets and adopting a safe system approach.

1.2.1 The importance of a targeted approach

Targeted road safety programmes have increasingly been the approach taken in many OECD countries since the late 1980s. In 1994, the OECD report "*Targeted road safety programmes*" (OECD1994) concluded that:

"The existence of targets and targeted road safety programmes increases the likelihood that safety policies will be implemented and target setting leads to better and more realistic programmes."

Target setting was further reviewed by the OECD in the report "*Safety on the roads: What's the Vision*" (OECD 2002) which concluded that targets have proven to be a valuable tool in the development of effective road safety programmes. There are several reasons why road safety targets deliver road safety benefits:

- Setting targets communicates the importance of road safety;
- Targets motivate stakeholders and increase accountability for achieving results;
- Targets convey the message that the Government is serious about reducing road casualties;
- Sub-national targets widen the sense of ownership by creating greater accountability, establishing more partnerships, and generating more action;
- Targets raise media and public awareness and motivate politicians to support policy changes and to provide resources.

A review of the safety performance of 14 OECD countries (Wong et al 2006) showed that countries with targets performed better than those without over the period 1981-1999, and that overall, countries with targets had 17% lower fatalities than countries without. The 2004 World Report on Road Traffic Injury Prevention (WHO 2004 op cit) recommended that national road safety strategies should include ambitious but achievable performance targets, supported by national plans that set out specific interventions to achieve them.

In recognition of the need to review road safety performance and consider how challenging and ambitious targets can be set and achieved, the Joint OECD/ECMT Transport Research Centre set up an expert group to review the state of the art in improving road safety performance. The report "*Towards Zero: ambitious road safety targets and the safe system approach*" (OECD 2008) describes the necessary fundamental shift in road safety thinking to achieve long term very ambitious targets. The findings of this report provide the framework for the recommendations of the present report.

1.2.2 Types of targets

Road safety targets may be aspirational or empirically based.

Aspirational targets are used in many countries and typically aspire to ambitious reductions in road deaths. They have the advantage of ambition and may involve a change in mind set from a conservative approach to casualty reduction. However, they are not linked to specific interventions or road safety programmes and may not be effective in creating the detailed dialogue between Government, stakeholders and the public that is needed to secure sustained and successful action. If such targets are not seen as feasible and achievable they may undermine the credibility of target setting and fail to lead to improvements in road safety management and programmes.

Aspirational targets are best used as a means of establishing a long term vision for road safety improvements, such as the achievement of zero death and serious injury, in conjunction with interim targets for quantified improvements over specific time periods.

Road safety visions indicate a country's underlying community values in relation to the degree of acceptability of road trauma as a consequence of mobility. Some countries have adopted the value that it is unacceptable for anyone to be killed or seriously injured as a result of road crashes. Sweden's Vision Zero, for example, states that "Nobody is to be killed or seriously injured as a result of traffic accidents and that the design and functioning of the road transport system shall be adapted to the requirements resulting from this ruling". This Safe System approach will be described in a later section.

Interim targets in support of road safety visions ideally should be empirically based. This means that they should reflect the estimated impact of interventions that are set out in a road safety strategy. Empirically derived targets typically are based on analysis of previous empirical evidence on the effectiveness of interventions, combined with analysis of past and future trends in casualties. In this way targets can be linked to a strategy for delivery and a road safety management plan that provides clear accountability and allocation of responsibility between Government and key agencies. Collection and analysis of sound data is integral to the process of setting empirically based targets and for monitoring the results of programmes in order to ensure that the necessary progress is being made to reach the target.

Targets can also be set at different levels: final outcome, intermediate outcome, or output targets.

Final outcome targets usually refer to the total annual number of road casualties, either for a specific year or as part of a long-term vision such as zero deaths. Time-based targets are often set for a 10 year period.

Intermediate outcome targets, or safety performance indicators, set goals for specific elements in a road safety strategy. They may be linked to the reduction of key risk factors such as speed, drink driving, seat belt and helmet use, or to vehicle and infrastructure standards. They may be geographically specific or they may relate to particular road user groups.

Output targets are physical deliverables such as the number of speed enforcement operations and are linked to the means to achieve a desired outcome.

Targets may also be set at national or regional level. Regional targets can provide useful impetus to national target setting as well as having a unifying function for the regional performance. A major benefit of regional targets is to encourage national governments to prioritize road safety and to provide a benchmark for the level of progress that is necessary and desirable. They are of particular value for low and middle-income countries as a means to promote road safety. Ministerial endorsement of a regional road safety target can be the necessary first step to developing a road safety programme in a country.

1.2.3 Examples of national road safety targets

Sweden had a target of 50% reduction in fatalities between 1996 and 2007, together with several sub-targets that related to reductions in specific crash types such as head-on collisions and single vehicle accidents, reducing travel speeds and increasing seat belt use. A new road safety strategy is being developed with targets for 2020 aligned with the long-term Vision Zero approach.

Canada has adopted both a national target of 30% reduction in the number of fatalities and serious injuries in 2008-2010 compared with 1996-2001, and detailed sub-targets that include specific crash types and road user groups. The sub-targets were based mainly on past achievements and on estimated future achievement.

In **Great Britain**, a national target for 2010 was set in 2000 for a 40% reduction in all fatal and serious injuries, and 50% for children, based on the average during 1994-1998. This target was empirically based using a "bottom-up" analytical approach. Trends in collisions and in collision rates per km of travel by road user group were examined, and the effectiveness of potential measures was estimated taking into account different traffic growth and policy implementation scenarios. New targets for 2020 for deaths and serious injuries separately are in the process of being developed and consulted upon.

1.2.4 Ambitious long-term targets and the Safe System approach

Target setting is normally for a period of around ten years, but several countries have now taken a new approach for strategy formulation and planning that focuses on a long term ambition in addition to a numerical target. This is a radical shift in the road safety sector that reflects the need for a raised level of ambition to reach safety standards that are common in other transport sectors such as aviation. Whereas such visions were previously seen as unachievable, it is now becoming politically unacceptable in a growing number of countries to endorse any significant number of deaths and serious injuries on the road network. Elimination of death and serious injury has thus become the appropriate level of ambition in the long term.

This shift in ambition requires a major policy shift and a commitment to innovation to achieve the desired result, rather than relying on current and projected performance expectations alone. This implies combining aspirational and evidence based targets, with the latter as milestones on the path to the ultimate goal, and with interventions shaped by the level of ambition. The major policy shift required is characterised the Safe System approach.

The Safe System approach is described in detail in the *Towards Zero* report (OECD 2008 op cit). The underlying rationale is that road users should never be subject to impact energy levels that are sufficient to cause death or serious injury. This leads to the need for innovative thinking about interventions, including developing forgiving infrastructure, improving vehicle safety for those both inside and outside the vehicle,

and reducing traffic speed to better manage crash energy and reduce injury risk, especially for vulnerable road users. It requires a clear understanding of crash types and associated risks, and the existence of adequate legislation and enforcement to achieve high levels of road user compliance, and alignment of road safety with other societal goals. An essential element is adequate institutional management capacity to prioritize road safety in areas beyond those where action is traditionally taken.

[1.2.5 Objectives and methodology of the UNDA Targets project](#)

The project *Improving Global Road Safety: setting regional and national road traffic casualty reduction targets* has been initiated as a continuation of efforts to implement the recommendations made in the United Nations General Assembly Resolution A/RES/60/5, that was reaffirmed in Resolution A/RES/62/244 stating the importance of addressing global road safety issues and the need for further strengthening of international cooperation and knowledge sharing taking into account the needs of developing countries. For this reason, the project is focused on assisting low and middle income countries to develop regional and national road traffic casualty reduction targets and to provide them with examples of good road safety practice that could help them to achieve the targets selected by 2015.

The focus of the project is a series of road safety seminars in each of the United Nations Regional Commission areas that will provide information on target setting and on good practice interventions that have been successfully employed in countries with good road safety records. These seminars are the starting point for a development process that will be needed for low and middle income countries to make progress in reducing road traffic casualties. The seminars aim to bring together countries with similar problems together with a wide range of road safety experts from countries where targets are being or have been successfully used to support road safety policies and/or programmes. Such knowledge sharing is a vital component of action necessary to improve global road safety.

Road safety targets already exist at regional level:

- ECE region: European Union (EU) and European Conference of Ministers of Transport (ECMT) have set targets to reduce fatalities by 50% by 2010 and 2012 respectively.
- ESCAP Ministers agreed in 2006 to cut deaths by 600,000 by 2015.
- ECA Ministers of Health and Transport agreed in 2007 to reduce road fatalities by 50% by 2015.

It is most likely that ESCWA member States will agree on a regional target of 30% reduction on road crash fatalities for the year 2015 during the coming 11th session of ESCWA Transport Committee that will be held during the first quarter of 2010.

These regional targets are a valuable starting point for countries to set their own targets, although they are largely aspirational rather than empirical and evidence based. The UNDA project aims to assist countries to move towards national targets that are evidence based and linked to a road safety strategy.

SECTION 2: IMPLEMENTATION OF THE PROJECT IN THE UNECE REGION

The UNECE region includes a diverse set of countries, and implementation of the UNDA project has concentrated on the non-EU member countries including Central Asian republics. The participants at the seminars in these countries recognized that road traffic casualties are still dramatically affecting their countries and that road safety is not just a transport issue, but it is also a health, social, financial and economic hazard, negatively impacting on their development.

2.1 Road safety situation in the UNECE region

The UNECE region covers more than 47 million square kilometres and has 56 member States. These include the countries of Europe, but also countries in North America (Canada and United States), Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) and Western Asia (Israel). The region is home to 20% of the world population. It includes some of the world's richest countries, as well as countries with a relatively low level of development. GNI per capita ranges from \$460 in Turkmenistan to \$84,890 in Luxembourg.¹



Map No. 3276 Rev. 11 UNITED NATIONS
May 2009

Department of Field Support
Cartographic Section

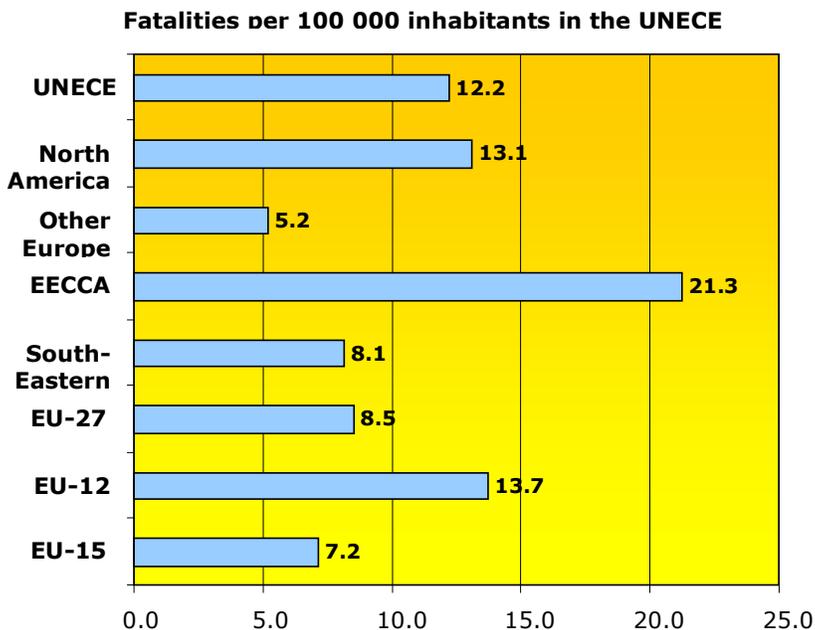
¹ Source:

WHO Global Status Report on Road Safety, 2009. Data are not available for Andorra, Liechtenstein and Monaco.

This diversity in the levels of development together with variation in the degree of motorisation is reflected in the diversity in the road safety status of member States as shown in the chart below which presents fatal casualty rates by sub-region. The highest rates are in the Eastern Europe and Central Asian countries, followed by the 12 recent members of the EU and by North America. One of the aims of the Targets project is to take advantage of this diversity by encouraging the sharing of experience and knowledge, in order to help the countries with lower levels of road safety to improve their situation.

Detailed tables showing the road safety situation in the UNECE region in 2007 are shown in the Statistical Annex. Data have been taken from the WHO Global Status Report on Road Safety and, for EU countries, from Eurostat. Fatality rates per million population ranged from 29 in Malta to 306 in Kazakhstan using WHO estimates adjusted for the 30 day definition of a road death and for under-reporting in some countries. Nine countries, all in Western Europe plus Israel, had rates up to 60 per million population. Fourteen countries had rates between 60 and 100 per million, and this group included five countries in South East or Eastern Europe or Central Asia. There were eighteen countries with rates between 100 and 150 per million, the majority in south east or eastern Europe and Central Asia, but also including Belgium and the United States. The eleven countries with the highest rates in excess of 150 were all in Eastern Europe or Central Asia, apart from Lithuania.

Between 1997 and 2007 fatalities fell in 35 countries and rose in 16. For a few countries² data were not available for both years. The largest declines were experienced in Portugal, Germany, France, Switzerland, Austria, and the Netherlands, with the largest increases being in Kazakhstan, Kyrgyzstan, Azerbaijan, Ukraine, Georgia, and Turkmenistan. With some exceptions, the general pattern is one of falling fatalities in EU countries and other western European countries, and rising fatalities in Eastern Europe and Central Asia.



Source: UNECE Transport Division

² Andorra, Monaco, Montenegro, San Marino, and Serbia.

The WHO Global Status Report categorises countries into low, medium and high income groups using the World Bank Atlas method based on gross national income (GNI) per capita where low-income=\$395 or less; medium-income=\$396 to \$11,455; and high-income=\$11,456 or more. Amongst the regional UNECE member States, twenty-nine are high-income countries, twenty-one are medium-income, and three are low-income. The high-income countries include the EU members with the exception of Bulgaria, Latvia, Lithuania, Poland, and Romania which are medium-income. The other high-income countries are the non-EU European countries of Andorra, Iceland, Liechtenstein, Monaco, Norway, San Marino, and Switzerland. The remaining countries, mostly in Eastern Europe, are medium-income except for the Central Asian countries of Kyrgyzstan, Tajikistan and Uzbekistan which are low income. The non-regional UNECE member States i.e. Canada, the United States, and Israel are high-income countries.

2.3 Choice of countries for action

The wide variation in incomes and fatality rates within the UNECE demonstrates that the UNDA Target project is just as relevant in this region as in regions where there is a lower level of development.

A consistent pattern emerges of a lower level of safety in medium and low-income countries of Eastern and South East Europe and Central Asia. The decision was taken therefore to concentrate resources in the Targets project in the first instance on Eastern Europe and Central Asian countries, and to organize a seminar for these countries, which was held in Minsk, Republic of Belarus, in cooperation with the Government of Belarus. This group of countries includes three low-income countries, Kyrgyzstan, Tajikistan, and Uzbekistan, and the medium-income countries of Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, the Republic of Moldova, Turkmenistan the Russian Federation and Ukraine, thus fulfilling the objective of the project to assist low and medium-income countries.

In addition, the Evia Chamber of Commerce and Industry and the Hellenic Chambers Transport Association, with the support of the Hellenic Ministry of Transport and Communications hosted a conference for countries in South East Europe in recognition of their tendency to higher than average fatality rates compared with most of Western Europe. In addition to Greece, this group includes the medium-income countries of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, Romania, Serbia, the Former Yugoslav Republic of Macedonia and Turkey.

The two events were also designed to focus on groups of countries that are homogeneous in terms of geographical location and road safety conditions. In addition, the countries chosen for the seminar have a commonality of political history and language. The conference countries are geographically close together and several also have common political background with similar problems. Tourism is also a common theme in these countries. The two groups together cover all the medium-income countries in UNECE apart from Latvia, Lithuania and Poland, all of which are EU members.

The recommendations of the OECD *Towards Zero* report provided guidance to countries to assist in setting and achieving ambitious road safety targets and gave a valuable framework for the seminar and conference. These recommendations place targets firmly within the context of effective road safety management in a Safe System approach for delivery. One of the objectives of both the seminar and the conference therefore was to introduce the concept of the Safe System approach in the context of

the OECD Report's recommendations as guidance on good practice in setting and achieving targets.

2.4 The UNECE regional seminar

2.4.1 Participation

The seminar was organized by the United Nations Economic Commission for Europe (UNECE) in cooperation with the Government of the Republic of Belarus. It took place in Minsk on 12-14 May 2009. Nine countries in Eastern Europe, the Caucasus and Central Asia were represented, and delegates also came from several international organisations and from the other United Nations Regional Commissions.

Regional participants came from the following countries: the Republic of Belarus, the Republic of Armenia, the Azerbaijani Republic, the Republic of Moldova, the Russian Federation, the Republic of Tajikistan, the Republic of Uzbekistan, Turkmenistan, and Ukraine. Georgia, Kazakhstan, and Kyrgyzstan were not represented, despite Kazakhstan and Kyrgyzstan having the highest fatality rates and growth of numbers of deaths in the region. Delegates represented Government Ministries of the Interior, Transport, Education, and External Affairs, and Traffic Police. The Executive Committee of the Commonwealth of Independent States was also represented.

2.4.2 Sessions at the seminar

The road safety situations in Belarus and in the wider UNECE region were described in the opening session of the seminar. Following sessions described the objectives of the seminar and the broader global road safety context. All participating countries were given the opportunity to present the state of road safety in their country, and statements were made by representatives from Armenia, Belarus, Moldova, the Russian Federation, Ukraine and Uzbekistan. Representatives from the United Nations Regional Commissions of Western Asia (ESCWA), Latin America and the Caribbean (ECLAC), and Asia and the Pacific (ESCAP) described the road safety situation and activities under the Targets project in their regions.

The findings of the report "Towards Zero" that was published by the International Transport Forum of the OECD in 2008 (OECD 2008 op cit) were presented. The presentation described the recommendations of the report, in particular the Safe System Approach and how road safety management systems should be organised to deliver ambitious targets. The experiences of road safety planning in Spain, France, Poland, Western Australia and Great Britain were presented as examples of good practice.

Other presentations covered the enforcement of the United Nations road safety legal instruments, the Conventions on Road Traffic and on Road Signs and Signals respectively (1968), the use of the WHO good practice manuals, the International Road Assessment Programme (iRAP), and the work of the International Road Transport Union, the International Road Federation, and ERTICO.

In the closing session of the seminar conclusions and recommendations for taking forward action on target setting were discussed and agreed (see Section 2.6 below).

2.5 The conference on improving road traffic safety in South-Eastern Europe

2.5.1 Participation

A conference on improving road traffic safety in South-Eastern Europe was hosted by the Evia Chamber of Commerce and Industry and the Hellenic Chambers Transport Association, with the support of the Hellenic Ministry of Transport and Communications. The conference took place in Halkida, Greece, on 25-26 June 2009.

The purpose of the conference was to focus on improving road safety in South-Eastern Europe as part of the UN global project on setting regional and national road traffic casualty reduction targets. Regional participants came from the following countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Former Yugoslav Republic of Macedonia, Greece, Montenegro, Romania, Serbia and Turkey. Delegates represented Government Ministries of the Interior, Transport and Communications, and Health, representatives of local government and Chambers of Commerce, Traffic Police, and NGOs and commercial interests. Delegates also came from France, Italy and the Netherlands and from international organizations.

2.5.2 Sessions at the conference

The purpose of the conference within the global road safety context was described in the opening session, which was followed by description of the road safety situation in Greece. At the end of the first day of the conference, representatives of the Hellenic Chambers of Commerce and Industry adopted a Declaration in which they resolved to support UNECE work, use their network in Greece to support promotional campaigns, advocate road safety measures, and establish funding mechanisms for implementing them. They invited the other South Eastern European countries to take action, agree road safety goals, and fully implement UNECE road safety related legal instruments. The delegates from the other countries present at the conference also made presentations on the situation in each of their countries. Representatives from other European countries with good road safety records described the approach to road safety policy in their countries, and there were presentations on road safety measures and on the work of victim organisations.

2.6 Conclusions and recommendations of the seminar and conference

The following set of Recommendations to address the road safety problem through collective efforts and cooperation at all levels were adopted at both the Minsk and Halkida events:

Recommendations:

1. The lessons learned during the seminar, especially about road safety initiatives and practices that can help Governments to set and achieve road safety targets at relatively low cost and within a short time frame, should be disseminated to the other government authorities involved in road safety in the countries participating in the seminar (Ministries of Interior, Transport, Health and Education).
2. Quantifying the road safety problem through good national statistics and research is an essential first step in establishing campaigns to improve road safety. Countries should therefore adopt/improve methodology for data collection and set-up/improve

the existing national computerised databases on road crashes. To this end, UNECE Glossary and database on road traffic accidents would be an appropriate basis.

3. Governments have a primary role to play in creating safe road traffic conditions through legislation, enforcement and education and they also need to optimise their expenditures. Reducing the number of road casualties leads to reduced costs for the Governments and the society. It is recommended to countries that have not set road safety targets yet, to begin to analyze and model data in order to produce evidence-based casualty reduction targets. In addition, data should be collected in order to have indicators in terms of different road safety problems or groups of road users (for example, separate targets for drinking and driving, use of seatbelts and child restraints and wearing of helmets). When setting targets, effectiveness should prevail on any other consideration, to the maximum extent possible.

4. Political will and commitment are key in improving road safety and these are needed to secure funds and address properly the main priorities in road safety, such as improving the infrastructure, education and enforcement which are high-cost measures.

5. International cooperation and knowledge-sharing in road safety should be further strengthened taking into account the needs of low and middle income countries; to this end, as a first step, a number of advisory missions should be conducted after the seminar upon request of countries in order to assess their road safety problems and help them develop targets in a bilateral setting.

6. It is recommended that Governments actively participate in the decision-making process concerning the UN Conventions on Road Traffic and on Road Signs and Signals, 1968, which takes place in the Working Party on Road Traffic Safety (WP.1). This would also provide for an appropriate forum where individual member countries learn from each other's experience and are able to compare their progress in achieving the targets with other countries in the region.

7. The results of the seminar should be included in the final report of the project, which should be communicated to the Global Ministerial Conference on Road Safety to be held in Moscow, Russian Federation, 19-20 November 2009, and further promoted as guidelines to be followed by countries in all the United Nations Regional Commissions' geographical areas.

2.7 Discussion of the outcome of seminar and conference and their contribution to the UNDA targets project

These two events focused on the South Eastern and Eastern countries in UNECE region because these countries have the highest rates of deaths in road traffic crashes in the UNECE region, and many of them are experiencing growing road safety problems due to rapid motorisation. In addition, many of the countries have experienced political changes that require a reassessment and reorganisation of the way that road safety is managed.

It was notable during both events that the same key risk factors are common to all countries: speed, drink-driving, lack of use of seat belts and helmets, and infrastructure inadequacies. The need to increase enforcement of traffic law and to raise awareness of road users of road traffic risk were also common themes.

There were some differences in the organisation of road safety. In the countries that attended the Minsk seminar road safety was usually the responsibility of the Traffic

Police, whose primary focus was on enforcement and education. The countries of South Eastern Europe had more diverse organisation with police, Interior Ministry and Transport Ministry involvement.

Target setting was being considered or had already taken place in some countries, but an integrated approach with empirically derived evidence-based targets and a Strategy for delivery was usually not yet in place.

The events are the start of a process of change and development, but it would be unrealistic to expect that well developed targets and strategies will be set just as a result of these discussions. However, there is a clear willingness to tackle the road safety problem, and to use targeted methods to raise the performance. The acknowledgement that road safety is a social, economic and development issue, and that it is not acceptable to continue the remorseless loss of life that can accompany motorisation, is a positive step forward that should lead to results.

However, there will need to be follow-up activity and technical assistance will be required by many countries if they are to achieve the potential road safety improvements that adoption of best practice could bring. Most importantly, road safety management organisation and clarification of responsibilities and accountability will need to be addressed. The road assessment programme iRAP that was presented could make a significant contribution to effective infrastructure measures by providing information on high risk roads and the measures needed to save lives.

2.8 Other events organized by ECE under the project

ECE will organize a seminar-cum-study tour in Sweden, on 25-27 November 2009, in cooperation with the Swedish Road Administration. Twelve low and middle-income countries have nominated experts to participate in this event.

At the request of the Ministry of Transport and Communications of Kyrgyzstan, ECE will organize a national road safety seminar in Bishkek for representatives of the authorities involved in road traffic safety: Transport, Police, Statistics etc. ECE will benefit of the support of resource persons from the Government of Turkey and the Global Road Safety Partnership.

SECTION 3: ACTIVITIES IN OTHER UNITED NATIONS REGIONS

All the UN Commissions have held regional seminars to encourage target setting. They have resulted in clear support for targeted action, demonstrated by agreed Declarations for future progress. Two regions have produced detailed checklists as an aid to implementation of measures to achieve the targets.

3.1 The implementation of the targets project in the United Nations Economic Commission for Latin America and the Caribbean region (ECLAC)

Three seminars were arranged under the UNDA Targets project for different geographical areas within the region. The first Seminar was held in Buenos Aires on 26 27 November, 2008 for the countries of the Southern Cone of South America. The **Buenos Aires Declaration** was signed as a result of this seminar. This document recognizes the importance of road safety for the countries, willingness to collaborate with the UN initiatives (including the efforts made by the PAHO/WHO), and establishes

the necessity to coordinate concrete actions in road safety among these nations and to increase awareness among the population.

The second Seminar was held in Panama City, on 27-28 May 2009 for Central American countries. At the end of the seminar, these governments under the Mesoamerican Project umbrella, signed the Panama City Declaration in which they manifested their willingness to implement the project's recommendations and to follow-up the cooperation in the future, sharing information and best practice among the countries in the sub-region, under a cross-disciplinary approach.

The third seminar was held in Georgetown, Guyana from 2-4 September 2009 for countries of the Caribbean. The outcome of the seminar was a regional Road Safety Declaration for the Caribbean sub-region. The Declaration recognized that road traffic injuries and fatalities are a very serious problem affecting all sectors of the Caribbean region, and that they have enormous health, social and economic impacts on the whole community.

3.2 The implementation of the targets project in the United Nations Economic and Social Commission for Western Asia region (ESCWA)

ESCWA, in collaboration with the National Transport Authority of UAE, organized a two-day workshop on 16-17 June 2009 in Abu Dhabi, the United Arab Emirates. More than 75 participants from 13 ESCWA member countries attended. Participants included Government delegates, and representatives from private sector companies and NGOs. Country Representatives came from Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Palestine, Saudi Arabia, Sudan, Syria, United Arab Emirates, and Yemen. A study had been commissioned to compare road traffic safety management in three selected countries in the UNESCWA region (Bahrain, Egypt and Jordan).

This workshop was the fourth to deal with road safety issues to be held in recent years; the three other workshops dealt with the Implementation of Good Practices in Road Safety (Muscat, 28-29 November 2005), Capacity-Building of the National Focal Points of the First UN Global Road Safety Week (Cairo, 20-21 December 2006), and Building the Arab Mashreq Road Safety Partnership (Doha, 21-22 October 2008).

3.2.1 Summary of recommendations of the Workshop

The recommendations of the ESCWA Workshop in Abu Dhabi are almost identical to those of the ECE events, which is natural, taking into account that road safety situation creates the same concerns and improvement can only result from collective efforts and cooperation at all levels.

The meeting agreed to:

1. Disseminate to the government authorities involved in road safety in the ESCWA region the lessons and good practices by developing countries in achieving road safety targets relatively at low cost and within a short period of time;
2. Ensure that member states in the ESCWA region maintain a reliable database for road crashes and adopt/improve methodology for data collection and set up/improve the existing national computerized data bases on road crashes. Member states are encouraged to become members of the International Road Traffic and Accident Database (IRTAD) or to use UNECE Glossary and database on road traffic accidents as a basis;

3. Set a regional (ESCWA) target of 30% reduction on road crash fatalities for the year 2015. Member states are encouraged to start up/activate national road safety councils and implement appropriate interventions.
4. Encourage member states that have not yet set road safety targets to make efforts in order to produce evidence/based casualty reduction targets for 2015 and onwards;
5. Invite member states to provide ESCWA with national reports including their road safety management programmes and their plans for setting targets to reduce their traffic fatalities, and all the activities/actions/legislation taken since 2005.
6. Encourage member states to become contracting parties to the UN legal instruments related to road safety and properly implement them.
7. Request ESCWA Secretariat to continue to provide capacity building and technical support to the member states on issues in road safety and all other related subjects, and to consider participating in working structures in other regional commissions and other regional, interregional, and international fora.
8. Request ESCWA Secretariat to consider participating in working structures in other regional commissions and other regional, interregional, and international fora (events, activities, etc...) to represent the interest of member states, as needed.
9. Advise member states to participate with high-level representation in the First Global Ministerial Conference on Road Safety (Moscow, 19-20 November 2009).

Within this context ESCWA prepared a template of follow-up report on the implementation of Abu Dhabi recommendations and the progress in road safety improvement(s) taking 2005 as baseline. ESCWA is currently preparing a document compiling the inputs received from each country; this document will be part of ESCWA contribution to the First Global Ministerial Conference on Road Safety.

3.3 The implementation of the targets project in the United Nations Economic Commission for Africa region (ECA)

UNECA organized their seminar in conjunction with the Make Roads Safe Africa conference which was held in Dar es Salaam Tanzania, on 8 July 2009, organised by the Make Roads Safe campaign, the World Bank Global Road Safety Facility, the AA of Tanzania and UNECA. Following the conference, UNECA, in collaboration with the FIA Foundation, convened the African Regional Road Safety seminar from 9 to 10 July 2009 on the theme "Setting Road Safety Targets: A Way Forward for Reducing Accident Fatalities by Half by 2015". The conference and seminar were a follow-up to the African Road Safety Conference in Accra in 2007 which highlighted the vital link between the promotion of road safety and the overall development objectives. The Accra Declaration that was adopted by Ministers clearly stressed the need to set measurable national targets for road safety and traffic-injury prevention, and set a target for African countries of a reduction in road traffic deaths by 50% by 2015.

Delegates came from a wide range of African countries and international organisations. A key objective of the seminar was to review progress in initiating programmes to implement achievement of the Accra target. A framework of indicators for monitoring progress was drawn up and agreed.

Six case studies undertaken by UNECA in Cameroon, Ethiopia, Morocco, Niger, Tanzania and Zambia on the road safety situation were presented.

Recommendations from the seminar included the need to prepare the African input into the Moscow Ministerial meeting, reviews of progress using the agreed monitoring framework, and data harmonisation.

3.4 Road safety situation in ESCAP region

It is estimated that the number of deaths from road accidents in Asia is about 700,000 per year, accounting for more than half of the world's road fatalities. By 2020 it is estimated that two thirds of the world's road fatalities will occur in this region. Together, China and India accounted for more than half of the reported number of road fatalities in the ESCAP region in 2007.³ In China, however, the number of road fatalities has been decreasing since 2004.

Since the 1990s, concern has mounted over the rapid increase in the number of road deaths, particularly as many developing countries have entered a phase of rapid motorization. Today, more than 90 per cent of road traffic deaths occur in low- and middle-income countries. It has been recognized that many road accidents can be avoided and that road safety is essentially a development issue for many countries. The average economic cost of road accidents has been estimated at between 1 and 3 per cent of gross national product.⁴

Motorization rates range widely in the ESCAP region (the number of private cars per 1,000 persons ranges from 3 to 618). Two- and three-wheelers constitute more than two thirds of all motorized vehicles in Bangladesh, Cambodia, Indonesia, the Lao People's Democratic Republic, Myanmar, Nepal, Sri Lanka, Thailand and Viet Nam. However, the comparatively larger impact of road accidents on vulnerable groups in ESCAP developing countries is not due merely to a different vehicle mix; it is also a systemic issue in which accidents disproportionately impact on lower income groups and younger people. The global vehicle population has topped 1.3 billion; in Asia, the total was 569 million (43 per cent of the global population) in 2007. The vehicle population in China reached 160 million in 2007, and China has become the second largest automobile market and third largest automobile manufacturing country in the world.⁵

In many parts of developing Asia, encroachment onto the right-of-way is a common problem. After a road is developed, many people move in looking for business opportunities, thereby creating ribbon development along the roads. Pedestrians, bicycles, pushcarts, motorcycles, cars and trucks compete for road space and thus create serious safety problems.

The nature of road safety issues in ESCAP developing countries differs significantly from that in developed countries. In Asia, most of those killed or injured in road accidents are vulnerable road users, such as pedestrians and motorcyclists. In South Asian countries, typically more than 50 per cent of all road fatalities are pedestrians. In East Asian and South-East Asian countries, more than two thirds of the victims are motorcyclists. In contrast, in North and Central Asia the mix in terms of casualties is

³ Based on data from the World Health Organization (WHO), *Global Status Report on Road Safety: Time for Action* (Geneva, WHO, 2009), table A2.

⁴ Ibid., p. 2.

⁵ Wei Zhang and others, "Road safety in China: challenges and opportunities", Report No. UMTRI-2008-1, Transportation Research Institute, University of Michigan, 2008.

similar to that of members of the OECD. All the developing ESCAP countries have higher fatality rates than OECD countries.

According to the most recent updates in the Asian Highway Database, which contains data for 20 countries, a total of 6,284 fatalities and 35,131 accidents were reported on the Asian Highway (for 2008), indicating approximately one fatality per six reported accidents. Among the countries included in the Database, India, Uzbekistan and the Islamic Republic of Iran (in descending order) have the highest number of reported fatalities.

3.5 The implementation of the targets project in the United Nations Economic and Social Commission for Asia and the Pacific region (ESCAP)

In support of the UN General Assembly Resolutions on Global Road Safety, the ESCAP Ministerial Declaration on improving road safety in Asia and the Pacific was adopted in Busan, Republic of Korea, in November 2006. The Resolution recognised that road safety is a policy issue of major concern and resolved to save 600,000 lives over the period 2007 to 2015, and invited members to develop the Asian Highway as a model of road safety. The overall objective to reduce road deaths by 600,000 between 2007 and 2015 is supported by eight broad goals together with specific indicators for monitoring their achievement. These goals are:

- a. Making road safety a policy priority.
- b. Making roads safer for vulnerable road users.
- c. Making roads safer and reducing severity of crashes.
- d. Making vehicles safer.
- e. Improving national and regional road safety systems, management and enforcement.
- f. Improving cooperation and fostering partnerships.
- g. Developing the Asian Highway as a model of road safety.
- h. Providing effective education on road safety awareness.

For each of the eight goals, measurable targets and indicators have been developed in consultation with member countries. They have been refined through two Expert Group Meetings held under the UNDA project in Bangkok, on 27-29 October 2008 and 2-4 September 2009.

3.5.1 Major conclusions and recommendations of the Expert Group Meetings

Some of the the major conclusions and recommendations of the Expert Group Meetings are:

1. The Meeting encouraged ESCAP members to include adequate road safety components in all road projects, and to initiate dedicated road safety projects where appropriate. The Meeting encouraged delegates to consider the existing best practices in terms of separation of different types of traffic, such as exclusive motorcycles lanes and use of physical centre dividers.
2. The Meeting called on ESCAP members to consider improving their data collection and reporting systems and noted the important examples of progress reported by some countries.

3. The Meeting suggested systematic sharing of experiences with regard to the safe systems approach and special engineering measures to improve road safety as suggested in the Vision Zero approach of the Swedish road administration.

4. The Meeting noted with interest the successful Helmet for Kids programme of the Asian Injury Prevention Foundation in Viet Nam.

5. The Meeting agreed that ESCAP road safety goals, targets and indicators would provide useful guidelines for member countries in considering and developing their national road safety strategy, policy, goals and targets.

6. The Meeting acknowledged that harmonized definitions of various terms including fatality, injury, serious injury related to road safety may enhance quality and comparability of road safety data among member countries.

7. The Meeting suggested that experts from developed countries be invited to future expert group meetings on road safety to share their experiences on successful implementation of road safety programmes.

8. The Expert Group Meeting on Improving Road Safety, held in Bangkok from 2 to 4 September 2009, recommended that the ESCAP road safety goals, targets and indicators, as contained in the table below, be considered by the first session of the Forum of Asian Ministers of Transport to be held in Bangkok in December 2009.

ESCAP road safety goals, targets and indicators

<i>Goals and targets</i>	<i>Indicators for monitoring achievements</i>
<i>Overall objective: Saving 600,000 lives and preventing a commensurate number of serious injuries on the roads of Asia and the Pacific over the period 2007 to 2015.</i>	
a) Reduce fatality rates by 20 per cent from 2007 to 2015 (or reduce it to less than 10 per 10,000 motor vehicles by 2015).	1) Number of road fatalities (and fatality rates per 10,000 motor vehicles, per motor vehicle-km and per passenger-km). 2) Number of road crashes.
b) Reduce the rates of serious road injuries by 20 per cent from 2007 to 2015.	3) Number of serious road injuries (as well as injury rate per 10,000 motor vehicles and per motor vehicle-km).
<i>Goal 1: Making road safety a policy priority</i>	
a) Create a road safety policy/strategy, designate a lead agency and implement a plan of action, by 2010.	4) Information on existing national road safety policy, strategy, and plan of action. 5) Name of designated lead agency. Description of responsibilities of local, regional and national government organizations. 6) National road safety reports or impact evaluation reports of government programmes.
b) Allocate sufficient financial and human resources to improving road safety.	7) Amount of funding allocated to road safety programmes (public, private and donors).
<i>Goal 2: Making roads safer for vulnerable road users, including children, senior citizens, pedestrians, non-motorized vehicle users, motorcyclists and persons with disabilities</i>	
a) Reduce by one third the pedestrian death	8) Number of pedestrian deaths or pedestrian

rate in road crashes (or reduce it to less than 1 per 10,000 motor vehicles).

b) Increase the number of safe crossings for pedestrians (e.g., with subway, overhead crossings or traffic signals).

c) Make the wearing of helmets the norm and ensure minimum helmet quality, in order to reduce the motorcyclist death rate by one third (or reduce it to below the average motorcyclist death rate of the ESCAP region).

d) Ensure minimum child safety measures, in order to reduce the child death rate by one third (or reduce it to less than 0.01 per 10,000 motor vehicles).

e) Equip all school children with basic road safety knowledge.

deaths per 10,000 motor vehicles.

9) Information on programmes for the construction of new safe crossings or the improvement of crossings.

10) Number of motorcyclist deaths and motorcyclist deaths per 10,000 motorcycles.

11) Existing law or administrative rule for mandatory use of helmets and specifying minimum helmet quality standards. Information on helmet use (percentage).

12) Number of child fatalities in road crashes.

13) Existing law or administrative rule on measures for child safety in cars (child restraints) and on motorcycles (child helmets).

14) Information on use of child seat restraints and child helmets.

15) Existing or planned education programmes on road safety in schools, information on class level at which programmes start and their coverage.

Goal 3: Making roads safer and reducing the severity of road crashes (building "forgiving roads")

a) Integrate a road safety audit at all stages of road development starting at the design stage, carry out necessary improvement works, and improve hazardous locations.

16) Extent to which road safety audits are carried out for new road construction and major improvements.

17) Number of improvement programmes carried out to make roads "forgiving" (e.g., improving blackspots, removing or cushioning roadside obstacles).

b) Increase separate/secure road space for pedestrians and cyclists in urban and suburban areas (where space permits).

18) Existing length of pedestrian and bicycle paths in kilometres per 100,000 people or per 10,000 km of roads (along highways and city roads). Programme to construct pedestrian and bicycle paths.

Goal 4: Making vehicles safer and encouraging responsible vehicle advertising

a) Make regular inspections of road vehicles mandatory and ensure enforcement of inspection (starting in urban areas).

19) Existing law or administrative rule on vehicle inspection, frequency of inspection (annual), number of vehicle inspection facilities and organizations.

b) Ensure safety requirements for new vehicles are in line with international standards.

20) Existing law and regulation specifying vehicle safety standards and implementation.

Goal 5: Improving national and regional road safety systems, management and enforcement

a) Implement a national (computerized) database that provides information on road crashes.

21) Information on existing road safety database and responsible organizations.

b) Significantly increase compliance, e.g., with mandatory helmet and seat-belt use, drinking and driving rules, use of mobile phone and speed limits.	22) Information on compliance on helmet wearing (percentage). 23) Information on rules and compliance on seat-belt use, use of mobile phone (percentage use). 24) Information on rules and compliance related to drinking and driving and speed limits.
c) Allow alcohol tests for prosecution (either breathalyser and/or behavioural tests).	25) Existing alcohol-level-testing rules, types of tests and alcohol limits used and allowed for prosecution.
d) Make it the norm to keep motorcycle headlight on at all times.	26) Information on existing law or administrative rule on keeping motorcycle headlight on while driving.
e) Increase coverage of emergency assistance systems for road victims, to cover at least all urban areas and trunk roads.	27) Kilometres of road (by type) on which emergency services are provided. 28) Average emergency response time. 29) Number of emergency service centres per length of highways (except city roads).

Goal 6: Improving cooperation and fostering partnerships

a) Encourage and recognize private-sector sponsored initiatives.	30) Number of major partnerships in the area on road safety, funding (private sector, public-private initiatives).
b) Create new and deepen existing partnerships with non-governmental organizations.	31) Number of major partnerships with non-governmental organizations, scope and funding.

Goal 7: Developing the Asian Highway as a model of road safety

a) Reduce the total number of fatalities and road crashes on the Asian Highway.	32) Total number road fatalities and road crashes on the Asian Highway in each country per year.
b) Reduce the number of fatalities on <i>all</i> Asian Highway segments to below 100 per billion vehicle-km.	33) Number of fatalities per billion vehicle-km for each Asian Highway segment per year.
c) Increase resource allocation for road safety-related measures along the Asian Highway.	34) Amount of resources allocated to safety-related works for the Asian Highway segments from governments and donors.
d) Improve Asian Highway road segments to be forgiving to road users if a crash occurs. Demonstrate best practice.	35) Information on road safety assessment and rating programme for the Asian Highway.

Goal 8: Providing effective education on road safety awareness to the public, young people and drivers

a) Carry out targeted awareness campaigns and training programmes.	36) Information on the number of awareness campaigns and training programmes carried out.
--	---

3.5.2 Advisory missions and seminars under the project

Under the UNDA project ESCAP provided advisory services to Nepal and Kyrgyzstan.

The advisory Mission to Kathmandu was undertaken on the request of the Ministry of Physical Planning and Works, Nepal to assist and advise on development of national road safety strategy, goals, targets and indicators. A stakeholder consultation meeting was held in the Ministry of Physical Planning and Works on 8 October 2009 representatives of various agencies involved in road safety participated in the consultation meeting. As a follow-up to the advisory mission a workshop on developing national road safety strategy, goals, targets and indicators is being organized by ESCAP and the Ministry of Physical Planning and Works in Kathmandu on 25-26 November 2009.

The advisory mission to Bishkek was undertaken on the request of the Ministry of Transport and Communications, Kyrgyzstan on 6 November 2009 to assist and advise on development of national road safety strategy, goals, targets and indicators. A workshop was organized on 6 November 2009 at the Ministry of Transport and Communications, Kyrgyzstan. Various stake holders representing 11 agencies related to the road safety participated in the workshop. ESCAP made presentations on global and regional road safety initiatives and ESCAP road safety goals, targets and indicators.

SECTION 4: CONCLUSIONS FROM THE UNDA PROJECT

4.1 Current situation on target setting

The importance of road safety targets is widely accepted in all United Nations regions. The objective of the UNDA project to encourage the setting of targets was endorsed in all the regional meetings. Regional targets have been adopted by Ministers in the ECE (for EU and ECMT countries), ECA and ESCAP regions, and have been recommended recently for ESCWA. The WHO Global Status Report on Road Safety asked countries whether they had a strategy and measurable national targets and the table below shows the numbers of countries in each region that responded that they had a target. The greatest prevalence of targets was in the ECE region where 36 out of 56 Member States were found to have targets. However, it is encouraging that several countries in other regions have set national targets although regional targets have only been set recently or do not yet exist. The Global Status Report does not give details of the national targets that have been set, so it is not known whether they are empirically based or aspirational, or how likely they are to be achieved by the national strategies to deliver them. Despite this, the growth of targets in a diverse group of countries, including some low and middle-income countries, is a welcome indication that road safety is beginning to receive political priority.

REGIONAL AND NATIONAL TARGETS FOR REDUCTION IN ROAD DEATHS BY UN REGION

Region	Regional target	Status	Target period	Countries with targets*
ECE	-50%**	Adopted	2000-2012 2001-2010	36/56
ESCAP	-600,000	Adopted	2007-2015	16/40
ECLAC	No			10/33
ECA	-50%	Adopted	2007-2015	13/54
ESCWA	-30%	Recommended	By 2015	1/13

*Source: WHO Global Report on Road Safety, 2009. Where countries are Member States of more than one region they are only counted once in their geographic region e.g. UK is only counted in ECE and not in ECLAC and UNESCAP.

** Target for 2010 for EU and 2012 for ECMT. No target for whole ECE region.

4.2 Implementation of the UNDA Targets project

The main focus of the project was to hold regional seminars to encourage countries to set road safety targets. Seminars took place in all the UN regions. All the seminars had the common themes of promoting national and regional target setting, and sharing of best practice, and other common themes were data quality, preparation for the First Global Ministerial Conference on Road Safety in Moscow, and contracting to and implementing the United Nations legal instruments, the Conventions on Road Traffic and Road Signs and Signals (1968).

The project has been instrumental in raising road safety awareness and encouraging countries to set and achieve road safety targets in all the United Nations regions.

In ECE, the focus was on best practice including the recommendations of the OECD "Towards Zero" report, and the experience of successful countries. There was a recommendation for the seminars to be followed up with advisory missions to assist with assessment of road safety problems and development of targets. This is an important recommendation that emphasises the action that is needed to ensure that the UNDA project will have real impact.

The ECA seminar had as its main focus the implementation of the Accra Declaration's target for 2015. A key output was the schedule of indicators for monitoring countries' progress towards meeting this target.

The ECLAC Seminars produced Declarations for future action that focused on sub-regional cooperation and sharing of best practice, as well as the need to set targets.

The ESCWA seminar made an important recommendation for a regional target as well as promoting national target setting.

The output from the two regional Expert Group Meetings held in October 2008 and September 2009 in the ESCAP region was a detailed schedule of "ESCAP Goals, targets and indicators" as outlined above in table 1 for achieving a set of policy goals that are directed towards achieving the overall target that was set by Ministers in 2006.

Many ESCAP members and associate members have already adopted qualitative and/or quantitative road safety targets that are compatible with the ESCAP set described above. Some countries are in the process of developing national road safety strategy, goals, targets and indicators. Most targets of ESCAP developing countries are reductions relative to projected or expected increases in road fatalities in the future, implying an increase in absolute numbers of road fatalities due to continued motorization in the years to come.

4.3 Discussion

The UNDA project has been both timely and effective in setting the need for road safety targets firmly on the global road safety policy agenda. Its implementation has been taken seriously in all the United Nations regions, and the seminars have resulted in increased recognition of the value of targets, as well as being fora for exchange of information and discussion of common problems and best practice solutions. The OECD Report "Towards Zero" has been used as a framework for promoting target setting and Vision and the benefits of the Safe System approach in several of the seminars. The project has also been timely in the context of preparation for the First Global Ministerial Conference on Road Safety in Moscow in November 2009.

Target setting is now becoming mainstream in road safety policy and recognised as a necessary step towards casualty reduction and a means of prioritizing road safety. The UNDA project has helped to promote and reinforce the principle of target setting as a road safety tool. However, setting a target, particularly if it is aspirational rather than empirically based, is not sufficient in itself, and the UNDA project can only be a first step. Laudable as it is that there should be political endorsement of regional or national targets, and the value of this should not be underestimated, the real benefits in terms of casualty reduction will only be realised through concrete action. It is very encouraging that in two regions, ECA and ESCAP, schedules have been drawn up for monitoring of progress in achieving the targets. These will be of great assistance to countries and should be used to support the development of programmes for implementation of measures.

Targets should be firmly linked to a strategy for delivery that contains the programme for implementation of policy through legislation, enforcement, infrastructure improvements and a focus on road safety measures to address the key risk factors. The OECD Report has shown how targets are an integral part of a new approach to road safety, incorporating an ambitious Vision within a Safe System approach. Such an approach builds on proven effective measures, but goes further than traditional road safety programmes by concentrating on recognition of human frailty and the need to accommodate it through injury prevention and reduction systems. This approach is relevant to countries at all stages of development rather than something that can only be considered by countries at an advanced stage of road safety performance. The recommendations of the OECD report are indeed of great relevance to countries that are at the early stages of developing road safety policy. Using the methods that are recommended should enable effective mechanisms to be established at an early stage and should ensure that limited resources can be used in the most effective way. The importance of good road safety management systems to ensure effective planning and delivery is a key recommendation of the report.

SECTION 5: RECOMMENDATIONS

5.1 Follow-up action to the UNDA project

The UNDA project has been very valuable in promoting target setting and raising awareness of the need to address the problem of road crashes. However, for it to be fully effective action will be necessary to build on the activities that have taken place, and in particular to assist with knowledge sharing and capacity building.

It is recommended that:

- Consideration should be given to a series of regional workshops with practical training and capacity building as their aim to assist countries in setting targets and developing strategies for their achievement.
- A practical guidance manual and web-based materials should be prepared as a workbook for the workshops, drawing on the Towards Zero report and the WHO manuals.
- A monitoring system should be established in each United Nations region to track progress towards meeting regional and national targets.
- A consistent set of indicators should be drawn up based on the sets developed by ECA and ESCAP.
- Countries should endeavour to improve road safety data collection and should harmonize definitions on internationally accepted standards such as death in a road crash within 30 days.
- Regional Commissions should collect further information on the targets that have been set by countries.
- Regional Commissions should continue their efforts to explore and establish new projects for this vital issue in accordance with the progress achieved during this current UNDA project in order to ensure its sustainability.
- Regional Commissions should regularly meet to coordinate their work on road safety issues to enhance the efficiency of the United Nations work/outputs in this area.
- Member States should be encouraged to become Contracting Parties to the United Nations legal instruments related to road safety and to properly implement them.
- Regional Commissions should encourage participation in the Global Ministerial Conference on Road Safety and where necessary facilitate preparation for it.
- A Summary report of the UNDA Targets project should be communicated to the Conference.

5.2 Key steps for implementation of a targeted approach to road casualty reduction

5.2.1 Type of target

Several regions have agreed regional targets to reduce road deaths. These are aspirational targets that have been adopted by countries without a foundation of empirical analysis. Although the lack of analysis is a disadvantage, and there is the risk that such a target may be over-challenging, the momentum that has been achieved by regional targets has raised the profile of road safety and this should act as a spur to increased activity. What is lacking at present is the link to specific interventions for delivery of the targets. In the worst case scenario, if the regional targets fail to be backed up by the necessary level of activity, the credibility of target setting and road safety programmes generally may be undermined. Where countries are signed up to a regional target it is essential for them to develop a strategy for achieving the target. The question that must be answered is what needs to be done to ensure that the target will be achieved within the specified timeframe?

Where countries have not already committed to a regional target it is more appropriate that an empirically based target is developed that is based on analysis of problems and priorities and the measures that are available to reduce casualties.

However, either an aspirational or an empirically based target will not be achieved unless countries adopt a results focused strategy, preferably within a Safe Systems approach. This will require that countries improve their road safety management capacity in order to link delivery of interventions with the required outcomes to meet the target.

5.2.2 The recommendations of the UNDA project report

The recommendations of the OECD "Towards Zero" report provide a good framework for setting and delivering ambitious road safety targets. Governments seeking to implement a target based approach as a follow-up of the UNDA project, may implement these recommendations, which can be grouped into three sub-sets:

- **Creating the political climate for action**
 - o Adopt a highly ambitious vision for road safety
 - **Ambitious vision indicates that the road safety situation requires serious attention and should receive priority for government action.**
 - o Foster commitment at the highest levels of government
 - **High-level commitment from government for road safety measures based on sound advice can generate political and public support if backed by awareness raising and consultation processes.**
 - **Real progress requires that road safety is raised up the political agenda and given higher priority in government policy. There is a two-way process: governments can lead public opinion but also require support from the community in order to strengthen resolve and to stand firm in the face of opposition.**

- Understanding and targeting the problem

- Conduct sufficient data collection and analysis to understand crash risks and current performance
 - **Sound data underpin evidence based policy and are essential for setting realistic targets, developing a strategy and monitoring results.**
- Accelerate knowledge transfer
 - **Strong and sustained international cooperation is needed to support knowledge transfer.**
- Set interim targets to move systematically towards the vision
 - **Targets are the stepping stones to achievement of long-term vision. They should be ambitious, achievable and empirically based with a clear strategy for delivery.**

- Delivering measures to achieve the target

- Develop a safe system approach, essential for achieving ambitious targets
 - **Implementing a Safe System approach requires a new approach to system design that accommodates human error and compensates for human frailty.**
- Strengthen the road safety management system
 - **Countries should review their road safety management capacity and address management issues in order to build a safe system approach that will achieve interim targets and move towards the achievement of long-term vision.**
- Invest in road safety
 - **Achievement of ambitious targets will require making an economic case for more resources and harnessing non-government sources of finance.**
- Exploit proven interventions for early gains
 - **Proven interventions if implemented efficiently and matched to the individual circumstances of each country can deliver rapid improvements in road safety.**
 - **Government activity needs to be complemented by a community and private sector based approach to safety.**

5.3 Conclusions

Ambitious road safety targets are at the heart of an effective road safety management system. They are integral to the achievement of long term vision within a Safe System approach. Targets need to be based on analysis of results from interventions within a strategic programme for delivery of road safety measures.

An effective road safety management system is essential for the delivery of results. A review of capacity using the checklist developed by the World Bank (Bliss and Breen 2008) will highlight where systems are deficient and should be improved to strengthen delivery.

Good data systems are essential for identifying and understanding priority areas for action, and for monitoring progress.

Target setting should be approached as a component of the process of building a Safe System approach. Targets on their own do not save lives. They are effective through their activity raising potential within a programme of interventions to achieve them.

Acknowledgements

The present document is a summary of the report on the implementation of the project "Improving Global Road Safety: setting regional and national road traffic reduction targets" funded by the United Nations Development Account. The report has been commissioned by the UNECE, with kind additional funding by gTKP, to Mrs. Kate McMahon, Road Safety Consultant; it was produced in cooperation with the secretariats of all United Nations Regional Commissions.

References

- WHO (2004), *World Report on road traffic injury prevention*, World Health Organisation, Geneva.
- WHO (2009) *Global Status Report on Road Safety*
- OECD (1994), *Targeted Road Safety Programmes*, Road Transport Research Series, OECD, Paris.
- Elvik, R. (1993), *Quantified road safety targets: a useful tool for policy making*. *Accident Analysis and Prevention*, 25, 569-583.
- OECD (2002), *Safety on the Roads: What's the Vision?*, Road Transport Research Series, OECD, Paris.
- Wong, S.C., N.N. Sze, H.F. Yip, Becky P.Y. Loo, W.T. Hung and Hong K. Lo, *Association between setting quantified road safety targets and road fatality reduction*, *Accident Analysis and Prevention*, 2006, 38,997-1005.
- OECD (2008), *Towards Zero: Ambitious road safety Targets and the Safe system Approach*, Joint OECD/ITF Transport Research Centre, Paris.
- Wegman F., V. Eksler, S. Hayes, D. Lynam, P. Morsink and S. Oppe (2006), *SUNflower+6: a comparative study of the development of road safety in European countries*, SWOV, Leidschendam.
- Bliss, T. and J. Breen (2008), *Implementing the Recommendations of The World Report on Road Traffic Injury Prevention, Operational guidelines for the conduct of country road safety management capacity reviews and the related specification of lead agency reforms, investment strategies and safety programs and projects*, Global Road Safety Facility, World Bank, Washington DC.

STATISTICAL ANNEX

Table 1: UNECE MEMBER STATES REPORTED ROAD CRASH FATALITIES AND RATES PER MILLION POPULATION 2007

COUNTRY	FATALITIES	RATE	IG	COUNTRY	FATALITIES	RATE	IG
Albania ²	384	120	M	Lithuania	739	218	M
Andorra	N/A	N/A		Luxembourg	43	90	H
Armenia	371	124	M	Malta	12	29	H
Austria	691	83	H	Monaco	N/A	N/A	H
Azerbaijan ¹	1107	131	M	Montenegro	122	204	M
Belarus	1517	157	M	Netherlands	709	43	H
Belgium	1067	102	H	Norway	233	50	H
Bosnia and Herzegovina	428	109	M	Poland	5583	147	M
Bulgaria	1006	132	M	Portugal	974	92	H
Canada*	2889	88	H	Rep of Moldova ⁵	589	155	M
Croatia	619	136	M	Romania	2712	127	M
Cyprus	89	104	H	Russian Fed ¹	33308	234	M
Czech Rep	1221	120	H	San Marino	1	32	H
Denmark	406	74	H	Serbia	962	98	M
Estonia	196	147	H	Slovakia ³	627	116	H
Finland	380	72	H	Slovenia	292	145	H
France	4620	75	H	Spain	3823	86	H
Georgia ⁴	737	168	M	Sweden	471	52	H
Germany	4949	60	H	Switzerland*	370	49	H
Greece	1580	141	H	Tajikistan	464	69	L
Hungary	1232	123	H	FYR Macedonia*	140	69	M
Iceland*	30	100	H	Turkey ^{2*}	4633	62	M
Ireland	338	78	H	Turkmenistan ^{1*}	650	131	M
Israel	398	57	H	Ukraine	9921	215	M
Italy	5131	87	H	UK	3058	50	H
Kazakhstan ¹	4365	283	M	US*	42642	139	H
Kyrgyzstan ⁵	1252	235	L	Uzbekistan ^{2*}	2034	74	L
Latvia	419	184	M				
Liechtenstein	N/A	N/A	H	UNECE total	153,796	122	

Source: WHO Global Status Report on Road Safety, 2009, UNECE Transport Division and Eurostat Data for 2007 for deaths within 30 days except where marked.

1. within 7 days.

2. at the scene.

3. within 24 hours

4. within 20 days.

5. within 1 year.

*2006

Table 1A: UNECE MEMBER STATES ADJUSTED ROAD CRASH FATALITIES AND RATES PER MILLION POPULATION 2007

COUNTRY	FATALITIES	RATE	IG	COUNTRY	FATALITIES	RATE	IG
Albania	499	139	M	Lithuania	739	218	M
Andorra	N/A	N/A		Luxembourg	43	90	H
Armenia	417	139	M	Malta	12	29	H
Austria	691	83	H	Monaco	N/A	N/A	H
Azerbaijan	1,195	130	M	Montenegro	122	204	M
Belarus	1,517	157	M	Netherlands	709	43	H
Belgium	1,067	102	H	Norway	233	50	H
Bosnia and Herzegovina	428	109	M	Poland	5,583	147	M
Bulgaria	1,006	132	M	Portugal	974	92	H
Canada*	2,889	88	H	Rep of Moldova	571	151	M
Croatia	619	136	M	Romania	2,712	127	M
Cyprus	89	104	H	Russian Fed	35,972	252	M
Czech Rep	1,221	120	H	San Marino	1	32	H
Denmark	406	74	H	Serbia	962	98	M
Estonia	196	147	H	Slovakia	627	116	H
Finland	380	72	H	Slovenia	292	145	H
France	4,620	75	H	Spain	3,823	86	H
Georgia	737	168	M	Sweden	471	52	H
Germany	4,949	60	H	Switzerland*	370	49	H
Greece	1,580	141	H	Tajikistan	951	141	L
Hungary	1,232	123	H	FYR Macedonia*	140	69	M
Iceland*	30	100	H	Turkey	10,066	134	M
Ireland	338	78	H	Turkmenistan	926	186	M
Israel	398	57	H	Ukraine	9,921	215	M
Italy	5,131	87	H	UK	3,058	50	H
Kazakhstan	4,714	306	M	US*	42,642	139	H
Kyrgyzstan	1,214	228	L	Uzbekistan	2,644	97	L
Latvia	419	184	M				
Liechtenstein	N/A	N/A	H	UNECE total	164,915	131	

Source: WHO Global Status Report on Road Safety, 2009, and Eurostat

* 2006

Table 2: TEN YEAR TREND IN REPORTED FATALITIES 1997 TO 2007

Country	Fat 1997	Fat 2007	% change	Country	Fat 1996 or 97	Fat 2006 or 07	% change
Albania ²	266	384	44.4	Lithuania	752	739	-1.7
Andorra	N/A	N/A		Luxembourg	60	43	-28.3
Armenia	261	371	42.1	Malta	18	12	-33.3
Austria	1105	691	-37.5	Monaco	N/A	N/A	
Azerbaijan ¹	605	1107	83.0	Montenegro	N/A	122	
Belarus	1726	1517	-12.1	Netherlands	1163	709	-39.0
Belgium	1364	1067	-21.8	Norway	303	233	-23.1
Bosnia and Herzegovina	267	428	60.3	Poland	7310	5583	-23.6
Bulgaria	915	1006	9.9	Portugal	2521	974	-61.4
Canada*	3091	2889	-6.5	Rep of Moldova ⁵	569	589	3.5
Croatia	714	619	-13.3	Romania	2863	2712	-5.3
Cyprus	115	89	-22.6	Russian Fed ¹	27665	33308	20.4
Czech Rep	1597	1221	-23.5	San Marino	N/A	1	
Denmark	489	406	-17.0	Serbia	N/A	962	
Estonia	280	196	-29.7	Slovakia ³	788	627	-20.4
Finland	438	380	-13.2	Slovenia	357	292	-18.2
France	8445	4620	-45.3	Spain	5604	3823	-31.8
Georgia ⁴	449	737	64.1	Sweden	541	471	-12.9
Germany	8549	4949	-42.1	Switzerland*	616	370	-39.9
Greece	2105	1580	-24.9	Tajikistan	450	464	3.1
Hungary	1391	1232	-11.4	FYRMacedonia*	154	140	-9.1
Iceland*	10	30	200	Turkey* ²	5428	4633	--14.6
Ireland	473	338	-28.5	Turkmenistan* ¹	404	650	60.9
Israel	530	398	-24.9	Ukraine	5988	9921	65.7
Italy*	6676	5669	-15.1	UK	3743	3058	-18.3
Kazakhstan ¹	2364	4365	84.6	US*	41907	42642	1.7
Kyrgyzstan ⁵	685	1252	82.8	Uzbekistan* ²	1991	2034	2.1
Latvia	594	419	-29.5				
Liechtenstein	6	0		UNECE total		153,796	

Source: WHO Global Status Report on Road Safety, 2009, UNECE Transport Division and Eurostat Data for deaths within 30 days except where marked.

1. within 7 days.

2. at the scene.

3. within 24 hours

4. within 20 days.

5. within 1 year.

*1996 and 2006

**Table 3: EU COUNTRIES REPORTED ROAD CRASH FATALITIES,
INCOME GROUP AND ROAD USER % OF FATALITIES**

COUNTRY	FATALS		%CHANGE	POP	FATAL	IG	GNI	PED	CYC	M/C ²
	1997	2007								
Austria	1105	691	-37.5	8361	83	H	42700	16	5	9
Belgium	1364	1067	-21.8	10457	101	H	40710	10	8	15
Bulgaria	915	1006	9.9	7639	131	M	4590	26	4	0
Cyprus	115	89	-22.6	855	114	H	24940	18	3	28
Czech Rep	1597	1221	-23.5	10186	119	H	14450	19	10	11
Denmark	489	406	-17.0	5461	75	H	59130*	N/A	N/A	N/A
Estonia	280	196	-29.7	1335	146	H	13200	19	9	6
Finland	438	380	-13.2	5277	72	H	44400	13	6	11
France	8445	4620	-45.3	61647	73	H	38500	12	3	25
Germany	8549	4949	-42.1	82599	60	H	38860	14	10	18
Greece	2105	1580	-24.9	11147	141	H	29630	16	1	30
Hungary	1391	1232	-11.4	10030	122	H	11570	23	12	10
Ireland	473	338	-28.5	4301	78	H	48140	20	3	8
Italy	6714	5131	-23.6	58877	87	H	33540	13	6	26
Latvia	567	419	-26.1	2277	184	M	9930	37	8	4
Lithuania	752	739	-1.7	3390	218	M	9920	32	7	5
Luxembourg	60	43	-28.3	480	90	H	84890*	N/A	N/A	N/A
Malta	18	12	-33.3	407	29	H	14575	36	0	29
Netherlands	1163	709	-39.0	16419	43	H	45820	12	24	18
Poland	7310	5583	-23.6	38082	146	M	9840	35	9	5
Portugal	2521	974	-61.4	10623	92	H	18950	16	4	22
Romania	2863	2794	-2.4	21438	130	M	6150	11	7	8
Slovakia	788	627	-20.4	5390	116	H	11730	34	8	8
Slovenia	357	292	-18.2	2002	145	H	20960	11	6	18
Spain	5604	3823	-31.8	44279	86	H	29450	15	2	19
Sweden	541	471	-12.9	9119	52	H	46060	12	6	16
UK	3743	3058	-18.3	60769	50	H	42740	21	4	19
EU27	60267	42448	-30.0		86					
EU15	43314	28238	-34.8		73					

Source: European Commission CARE Database; UNECE; Who Global Status Report on Road Safety, 2009; World Bank

1. Atlas method
2. All two-wheel motorised vehicle riders

*2008

Table 4: EU COUNTRIES ROAD SAFETY INDICATORS

COUNTRY	URBAN SPEED LIMIT Km/h	BAC LIMIT g/dl (general)	% DEATHS INVOLVING ALCOHOL	SEAT BELT WEARING RATE FRONT	SEAT BELT WEARING RATE REAR	HELMET WEARING RATE
Austria	50	0.05	8	89	49	95
Belgium	50	0.05	N/A	79	46	N/A
Bulgaria	50	0.05	5	N/A	N/A	N/A
Cyprus	50	0.05	18	81	9	68
Czech Rep	50	0.0	3	90	80	97
Denmark*						
Estonia	50	0.02	48	90	68	N/A
Finland	50	0.05	24	89	80	95
France	50	0.05	27	98	83	95
Germany	50	0.05	12	95/96	88	97/96
Greece	50	0.05	7	75	42	58/32
Hungary	50	0.0	12	71	40	95
Ireland	50	0.08	37	86	63	N/A
Italy	50	0.05	N/A	65	10	60
Latvia	50	0.05	21	77	32	93
Lithuania	50	0.04	12	N/A	N/A	N/A
Luxembourg*						
Malta	50	0.08	N/A	96	21	N/A
Netherlands	50	0.05	25	94	73	92/72
Poland	50	0.02	14	74	45	N/A
Portugal	50	0.05	31	86	28	N/A
Romania	50	0.0	2	80	20	90/65
Slovakia	60	0.0	4	N/A	N/A	N/A
Slovenia	50	0.05	38	85	50	N/A
Spain	50	0.05	N/A	89	69	98/92
Sweden	50	0.02	20	96	90	95
UK	48	0.08	17	91	84/90	98

Source: WHO Global Status Report on Road Safety, 2009

- data unavailable

Table 5: EECCA COUNTRIES REPORTED ROAD CRASH FATALITIES, INCOME GROUP AND ROAD USER % of FATALITIES

COUNTRY	FATALS		%CHANGE	POP	FATAL	IG	GNI	PED	CYC	M/C ²
	1997	2007	1997-2007	2007 1000s	RATE Per m pop		PER CAP ¹ US\$ 2007	%	%	%
Armenia	261	371	42.1	3002271	124	M	2640	39	<1	0
Azerbaijan (adj 30 day)	605	1107 (1195)	83.0	8467167	131 (141)	M	2550	38	1	1
Belarus	1726	1517	-12.1	9688795	157	M	4220	40	9	4
Georgia	449	737	64.1	4395420	168	M	2120	28	<1	N/A
Kazakhstan (adj 30 day)	2364	4365 (4714)	84.6	15421861	283 (306)	M	5060	16	N/A	N/A
Kyrgyzstan (adj 30 day)	685	1252 (1214)	82.8	5316543	235 (228)	L	590	43	1	0
Rep of Moldova (adj 30 day)	569	589 (571)	3.5	3793604	155 (151)	M	1260	34	2	4
Russian Federation (adj 30 day)	27665	33308 (35972)	20.4	142498532	234 (252)	M	7560	36	0	2
Tajikistan	450	464	3.1	6735996	69	L	460	44	6	1
Turkmenistan* (adj 30 day)	404	650 (702)	60.9	4965278	131 (141)	M	1234	29	5	N/A
Ukraine	5988	9921	65.7	46205382	215	M	2550	56	N/A	N/A
Uzbekistan* (adj 30 day)	1991	2034 (2644)	2.1	27372260	74 (97)	L	730	N/A	N/A	N/A
EECCA	43157	56315	30.5	277863109	213					

Source: UNECE; WHO Global Status Report on Road Safety, 2009

1. Atlas method
 2. All two-wheel motorised vehicle riders
- *1996 and 2006

Fatality data as reported (see Table 1 for definition). Figures in brackets show fatalities and rate adjusted to 30 day definition of road traffic death.

Table 6: EECCA COUNTRIES ROAD SAFETY INDICATORS

COUNTRY	URBAN SPEED LIMIT KM/H	BAC LIMIT g/dl (general)	% DEATHS INVOLVING ALCOHOL	SEAT BELT WEARING RATE FRONT	SEAT BELT WEARING RATE REAR	HELMET WEARING RATE
Armenia	60	0.08	6	N/A	N/A	N/A
Azerbaijan	60	0.0	3	N/A	N/A	N/A
Belarus	60	0.05	13	N/A	N/A	N/A
Georgia	60	0.02	37	N/A	N/A	N/A
Kazakhstan	60	no limit defined	3	NA	N/A	N/A
Kyrgyzstan	60	no limit defined	N/A	N/A	N/A	N/A
Rep of Moldova	60	0.05	17	N/A	N/A	N/A
Russian Federation	60	0.03	10	33	N/A	N/A
Tajikistan	60	0.03	5	N/A	N/A	N/A
Turkmenistan*	60	0.05	7	N/A	N/A	N/A
Ukraine	60	0.0	N/A	N/A	N/A	N/A
Uzbekistan*	70	NONE	N/A	N/A	N/A	N/A

Source: WHO Global Status Report on Road Safety, 2009

Table 7: SOUTH EASTERN EUROPE COUNTRIES REPORTED ROAD CRASH FATALITIES, INCOME GROUP AND ROAD USER % of FATALITIES

COUNTRY	FATALS		%CHANGE	POP	FATAL	IG	GNI	PED	CYC	M/C ²
	1997	2007								
Albania (adj 30 day)	266	384 (499)	44.4	3190	120 (156)	M	3290	40	6	9
Bosnia & Herzegovina	267	428	60.3	3935	109	M	3790	24	6	5
Bulgaria	915	1006	9.9	7639	131	M	4590	26	4	0
Croatia	714	619	-13.3	4555	136	M	1046 0	20	5	19
Greece	2105	1580	-24.9	11147	141	H	2963 0	16	1	30
Montenegro	N/A	122	N/A	598	204	M	5180	20	0	4
Romania	2863	2794	-2.4	21438	130	M	6150	11	7	8
Serbia	N/A	962	N/A	9858	98	M	4730	25	9	6
FYR Macedonia	154	140	-9.1	2038	69	M	3460	34	4	11
Turkey (adj 30 day)	5181	5007 (6509)	--14.6	74877	67 (87)	M	8020	19	2	8
SE Europe	14124	9874 (11378)	-30.1	13927 5	71 (82)					

Source: UNECE; WHO Global Status Report on Road Safety, 2009; Turkish National Police

1. Atlas method 2. All two-wheeled motor vehicle riders

Fatality data as reported (see Table 1 for definition). Figures in brackets show fatalities and rate adjusted to 30 day definition of road traffic death.

Table 8: SOUTH EASTERN EUROPEAN COUNTRIES ROAD SAFETY INDICATORS

Country	URBAN SPEED LIMIT Km/h	BAC LIMIT g/dl (general)	% DEATHS INVOLVING ALCOHOL	SEAT BELT WEARING RATE FRONT	SEAT BELT WEARING RATE REAR	HELMET WEARING RATE
Albania	40	0.05	5	30	N/A	N/A
Bosnia & Herzegovina	60	0.03	7	N/A	N/A	N/A
Bulgaria	50	0.05	5	N/A	N/A	N/A
Croatia	50	0.05	30	45 *	N/A	N/A
Greece	50	0.05	7	75	42	58/32
Montenegro	50	0.05	N/A	N/A	N/A	N/A
Romania	50	0.0	2	80	20	90/65
Serbia	60	0.05	6	50-60	4-5	N/A
FYR Macedonia	60	0.05	5	16 *	N/A	2
Turkey	50	0.05	2	70 intercity, 28 urban*	N/A	12

Source: WHO Global Status Report on Road Safety, 2009

* Separate rates for front and rear seats not available

Table 9: UNESCWA MEMBER STATES REPORTED POPULATION, ROAD CRASH FATALITIES, AND NON-FATAL ROAD TRAFFIC INJURIES 2007

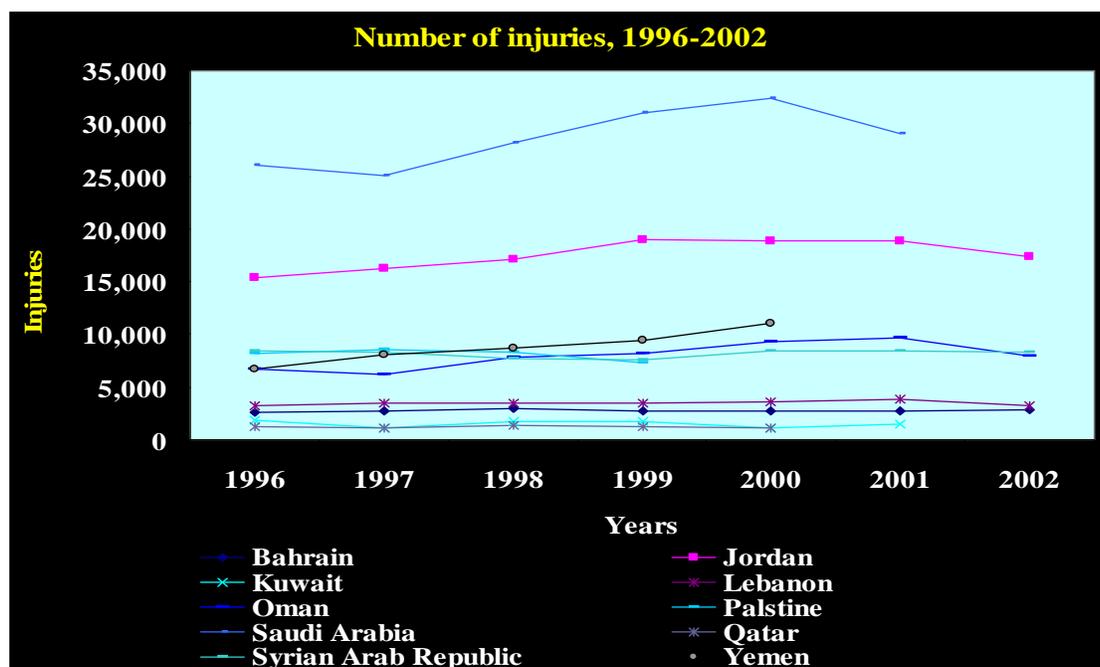
Country	Population	Fatalities	Reported non-fatal road traffic injuries	IG
Bahrain	752 648	91	3 415	H
Egypt	75 497 913	12 295	154 000	M
Iraq	28 993 374	1 789*	7 467*	M
Jordan	5 924 245	992	17 969	M
Kuwait	2 851 144	482**	8 584	H
Lebanon	4 099 115	497	6 266	M
Oman	2 595 133	798	8 531	M
Palestine	4 018 000	188*	5 838*	M
Qatar	840 635	199	1 053	H
Saudi Arabia	24 734 533	6 358	36 025	H
Sudan	38 560 488	2 227	21 329	M
Syria	19 928 516	2 818	16 145	M
United Arab Emirates	4 380 439	1 056	11 155	H
Yemen	22 389 169	2 781	19 253	L

Source: WHO Global Status Report on Road Safety, 2009, UNESCWA Transport and Trade Section

*: Data of 2005

** : Data of 2006

Figure 1: Selected UNESCWA member countries road safety indicators



Source: UNESCWA Assessment of Questionnaire on Road Safety sent to Member States, 2005

Table 10: ESCAP Countries Reported Road Crash Fatalities and Injuries

Country	Population 2007	GNI per capita for 2007 in US\$	I G	Number of registered vehicles	Reported number of traffic deaths	Est. road traffic death per 100 000	Reported Non fatal injuries
Afghanistan	27,145,275	319	L	731,607	1,779	39	3212
Australia	20,743,179	35,960	H	14,774,921	1,616	7.80	31204
Bangladesh	158,664,959	470	L	1,054,057	4,108	12.6	403000
Bhutan	658,479	1,770	M	35,703	111	14.4	724
Brunei Darussalam	390,056	30,580	H	304,432	54	13.8	556
Cambodia	14,443,679	540	L	154,389	1,668	12.1	25858
China	1,336,317,116	2,360	M	145,228,994	96,611	16.5	431139
Cook Islands	13,325	13,098	H	10,692	6	45	382
Fiji	838,698	3,800	M	78,833	59	7	663
India	1,169,015,509	950	M	72,718,000	105,725	16.8	452922
Indonesia	231,626,978	1,650	M	63,318,522	16,548	16.2	66040
Iran (IR of)	71,208,384	3,470	M	17,000,000	22,918	35.8	685611
Japan	127,966,709	37,670	H	91,378,636	6,639	5	1034445
Kiribati	95,067	1,170	M	16,000	7	7.4	n.a.
Lao PDR	5,859,393	580	L	641,081	656	18.3	8714
Malaysia	26,571,879	6,540	M	16,825,150	6,282	23.6	21363
Maldives	305,556	3,200	M	33,807	10	18.3	n.a.
Marshall Islands	59,286	3,070	M	2,487	1	1.7	35
Micronesia	111,117	2,470	M	4,217	2	14.4	50
Mongolia	2,628,840	1,290	M	161,989	562	19.3	932
Myanmar	48,798,212	281	L	1,045,105	1,638	23.4	12358
Nauru	10,152	7,842	M	—	1	9.9	9
Nepal	28,195,994	340	L	617,305	962	15.1	2653
New Zealand	4,178,525	28,780	H	3,189,131	423	10.1	16013
Pakistan	163,902,405	870	L	5,287,152	7,234	25.3	12990
Palau	20,314	8,210	M	5,530	3	14.8	91
Papua New Guinea	6,331,010	850	L	59,645	308	14.2	1210
Philippines (the)	87,960,117	1,620	M	5,515,576	1,185	20	5870
Republic of Korea	48,223,853	19,690	H	18,213,228	6,166	12.8	335906
Samoa	187,023	2,430	M	15,903	19	12.8	178
Singapore	4,436,281	32,470	H	851,336	214	4.8	10352
Solomon Islands	495,662	730	L	10,000	19	16.9	606
Sri Lanka	19,299,190	1,540	M	3,125,794	2,334	13.5	31688
Thailand	63,883,662	3,400	M	25,618,447	12,492	19.6	973104
Timor-Leste	1,154,775	1,510	M	26,649	49	16.1	1686
Tonga	100,336	2,320	M	2,226	7	7	n.a.
Tuvalu	10,530	2,441	M	906	1	9.5	12
Vanuatu	226,180	1,840	M	15,461	7	18.6	52
VietNam	87,375,196	790	L	22,926,230	12,800	16.1	10266

Source: Compiled from WHO Global Status on Road Safety, 2009; common member countries of ECE and ESCAP are excluded

