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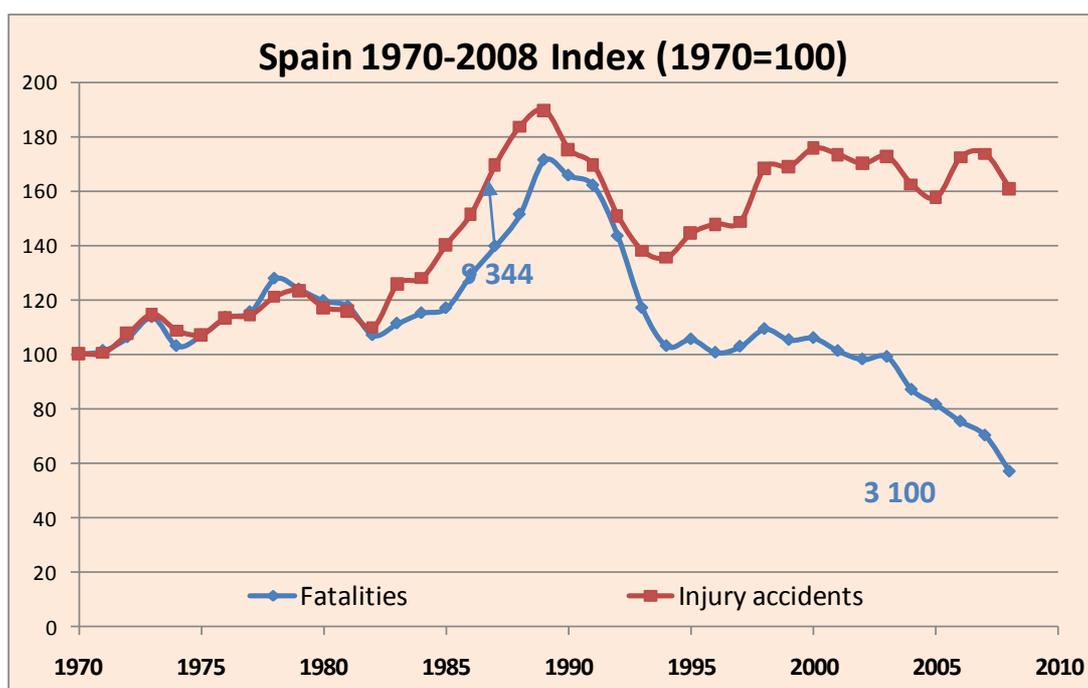
Towards Vision Zero

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The Swedish Parliament moved road safety policy into new territory with the adoption of its Vision Zero policy in the Road Traffic Safety Bill, passed by a large majority, in 1997. The vision sets a long term goal that *eventually no one will be killed or seriously injured within the road transport system*. This challenged policy makers and road safety experts to develop interventions to radically improve safety in a country already among the best performers. The ripples of this challenge have been felt in countries right around the globe, raising the level of ambition for road safety policy and driving the development of more effective packages of intervention.

Spain has experienced its own revolution in road safety, in response to a period of seriously deteriorating performance during the economic expansion of the 1980s (figure 1). Since a peak in fatal casualties of 9 344 in 1989 the death rate has been cut sharply despite a continuing increase in traffic. After a spell of stagnation in reducing road deaths in Spain in the late 1990s a program of new interventions has now restored the positive trend.

Figure 1. Road fatalities and injury crashes, 1970-2008



Source: IRTAD Annual Report 2009.

Table 2. Number of road fatalities and injury crashes, Spain 1970-2008

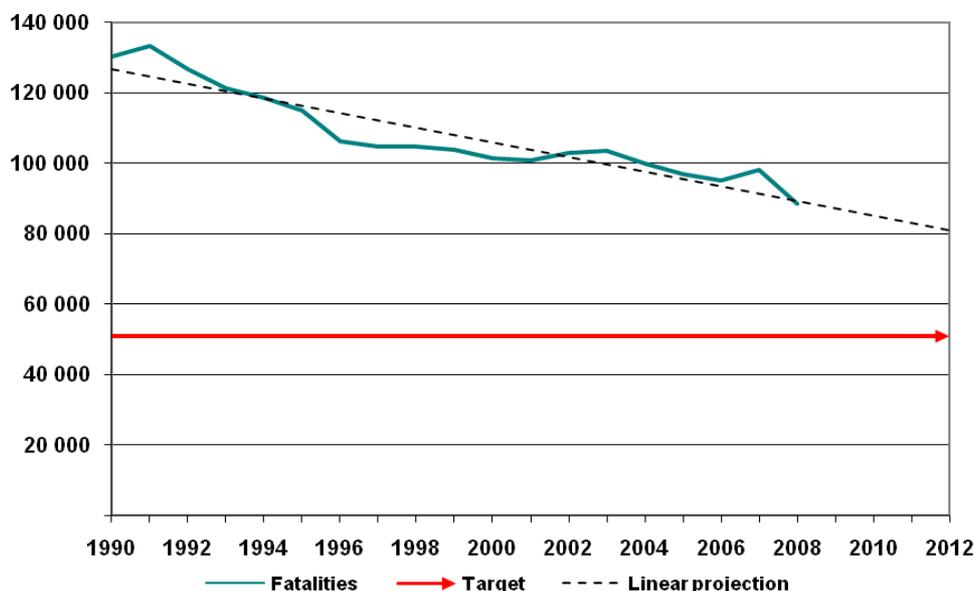
	1970	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008	% change over		
												2008 - 2007	2008 - 2000	2008 - 1970
Fatalities	5 456	9032	5776	5517	5347	5399	4741	4442	4104	3823	3100	-19%	-46%	-43%
Injury crashes	57 968	101507	101729	100393	98433	99987	94009	91187	99797	100508	93161	-7%	-8%	+61%

Source: IRTAD Annual Report 2009.

Vision zero is a controversial policy approach, including in Sweden, as it raises serious questions as to whether it is possible to achieve, how much expenditure is justified in achieving diminishing returns and how politically realistic is the goal? Politicians in many countries have been wary of being associated with a goal that might seem implausible to the public and especially the media. The discussion in Sweden in 1997 concluded that there could be no other ethical target. Plausible alternatives, such as basing expenditure on road safety on the returns expected by calculating benefits in terms of the statistical value of lives saved, are equally difficult for politicians to defend. Something approaching vision zero is already applied to the safety performance of rail and air transport, with every fatal accident treated as a serious avoidable incident that merits extensive investigation and remedial action.

A major exercise in public consultation on the appropriate vision for road safety was undertaken by the Government of Western Australia in 2007 (WA 2008 a & b). This explicitly addressed the issue of the credibility of a zero target, with both the public and the media. The outcome is a *Towards Zero* policy that has been successful in setting the level of ambition high but indicating that it cannot be achieved in a single step. This approach is reflected in the title of our own most recent report on road safety policy at the International Transport Forum, *Towards Zero: Ambitious Road Safety Targets and the Safe System Approach* (OECD/ITF 2008). This report makes the link between the long term vision for road safety outcomes and shorter term targets for improving performance. Critically it argues that national targets for reducing fatalities need to be linked firmly to the interventions and the investments planned under current road safety programmes. This is the key to ensuring that targets such as the 50% cut in fatalities adopted by most European governments are operational rather than merely inspirational rhetoric.

Figure 2: Progress Towards ECMT¹ Target of 50% Reduction in Fatalities between 2000 and 2012



Source: ITF Statistics <http://www.internationaltransportforum.org/statistics/index.html> .

Figure 2 shows progress towards meeting targets agreed by ECMT Transport Ministers for the whole of Europe. Whilst western European countries are on track to meet the target, the group as a whole is not. This is because of weaker progress in much of Eastern Europe and especially in the CIS countries that have only recently reversed a negative trend. Within Western Europe performance differs widely as the selection of countries in table 2 illustrates. France and Portugal, for example, have shown a rapid improvement recently through more intensive implementation of well proven interventions targeting speed, drink driving, seatbelt use and safer vehicles, combined with new technology (particularly automatic speed detection and enforcement) and a more comprehensive approach. Spain has also accelerated improvement in performance since 2003.

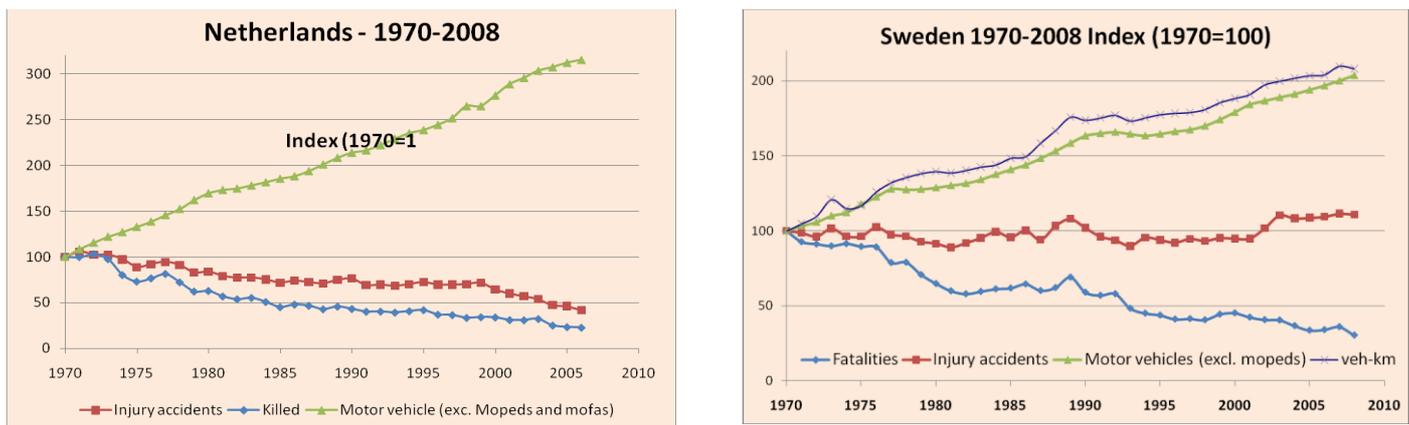
¹ The European Conference of Ministers of Transport was the predecessor to the International Transport Forum. The target was adopted by its European members encompassing almost all countries in Europe, including Russia, the Caucasus and Turkey.

Table 2: Fatal Road Causalities Rates in Selected European Countries

	Deaths in 2008	Deaths / 100 000 population in 2008	Annual improvement: 2000-2007
Portugal	974 (2007)	9 (2007)	-8.8%
Denmark	406	7	-7.8%
France	4 275	7	-7.7%
Germany	4 477	6	-6.3%
Netherlands	677	4	-5.9%
Spain	3 100	7	-5.7%
Sweden	397	4	-4.6%
Greece	1 657	15 (2005)	-3.4%
Finland	344	7	-2.7%
Italy	5 131 (2007)	9 (2005)	-2.6%
UK	2 645	5 (2007)	-2.2%
Romania	3 063	12 (2005)	+1.6%
Russia	29 936	24 (2005)	+1.7%

Source: IRTAD Annual Report and ITF Statistics (deaths within 30 days).

Figure 3. Evolution in numbers of road fatalities, injury crashes and vehicles 1970-2008



Source: IRTAD Annual Report 2009.

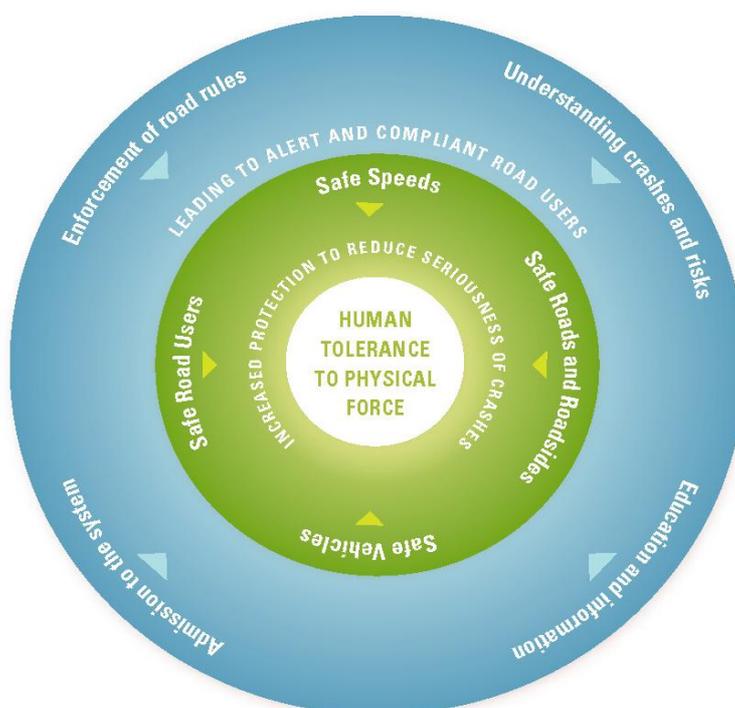
Perhaps surprisingly, the Netherlands and Sweden, the best performers in the world in terms of road deaths per head of population are also above average in terms of year on year improvement. Especially in the Netherlands, there has been no evidence of a diminishing potential for making further gains. This suggests that their similar vision statements, Sustainable Safety in the Netherlands and Vision Zero in Sweden, and the adoption of a safe system approach in both countries is paying dividends (figure 3).

Both countries see a safe system approach as essential if they are to achieve their ambitious long term visions. This involves taking as comprehensive approach to road safety policy as possible and focusing on interactions between traditional interventions. It means taking a new look at how infrastructure design and maintenance can be improved to help steer road users to safer patterns of behavior and support improvements in vehicle technology.

The safe system approach recognises that prevention efforts notwithstanding, road users will remain fallible and crashes will occur. It stresses that those involved in the design of the road transport system need to accept and share responsibility for the safety of the system, and those that use the system need to accept responsibility for complying with the rules and constraints of the system. It shapes interventions to meet the long term goal, rather than relying on “traditional” interventions to set the limits of any long term targets. And it focuses on developing a road safety management culture focussed on performance and integrated horizontally and vertically at all levels of government.

The basic strategy of a safe system approach is to ensure that in the event of a crash, impact energies remain below the threshold likely to produce death or serious injury. This threshold will vary from crash scenario to crash scenario, depending upon the level of protection offered to the road users involved. For example, the chances of survival for an unprotected pedestrian hit by a vehicle diminish rapidly at speeds greater than 30km/h, whereas for a properly restrained motor vehicle occupant the critical impact speed is 50km/h (for side impact crashes) and 70 km/h (for head-on crashes). Improving the management of speed is therefore a core priority.

Figure 4: The Safe System



Source: Cameron 2008 (Adapted from the Australian Transport Council 2007)

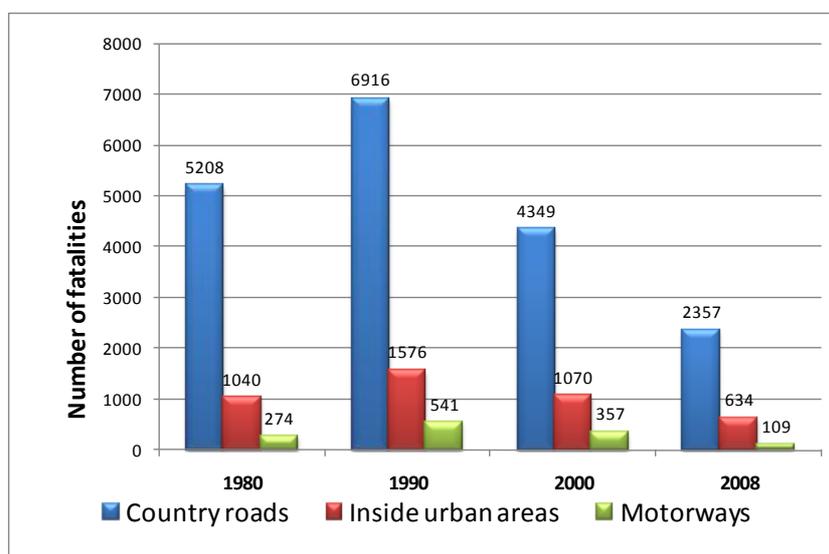
Elements of a safe system approach are already present in the policies of countries such as France and Spain that have made major improvements in recent years, with a broader set of better integrated interventions. Strategic road safety policy in Spain has advanced in three phases this decade (Navarro 2008, Zori 2009). In 2004 the traffic directorate, DGT, introduced a set of *special road safety measures* designed to achieve results quickly. These measures included the introduction of a penalty points system for driver licensing, the creation of a National Road Safety Observatory to monitor trends and analyse data to target new interventions effectively, a significant increase in traffic police numbers and the introduction of speed cameras on highways.

To ensure these measures had a permanent impact a *Key Strategic Action Plan* for 2005-2008 was developed in partnership with civil society and all relevant parts of government, with regular reviews of performance to monitor process. The Action Plan takes an integrated approach with measures addressing road user behaviour, vehicle safety and infrastructure design. Key elements of the Plan are:

- coordination of ministries, regional government and local road safety management;
- identification of specific targets on the basis of accident pattern analysis to prioritise interventions aimed at different types of road user;
- establishment of a system of indicators to measure and evaluate progress towards the targets and the success of measures introduced;
- monitoring and reporting on progress every six months.

Improvement in safety on the highways has been rapid, but less satisfactory in urban and suburban areas (figure 5). The third step was therefore development of a *Basic Urban Road Safety Plan*, defining a methodology for interventions in this environment.

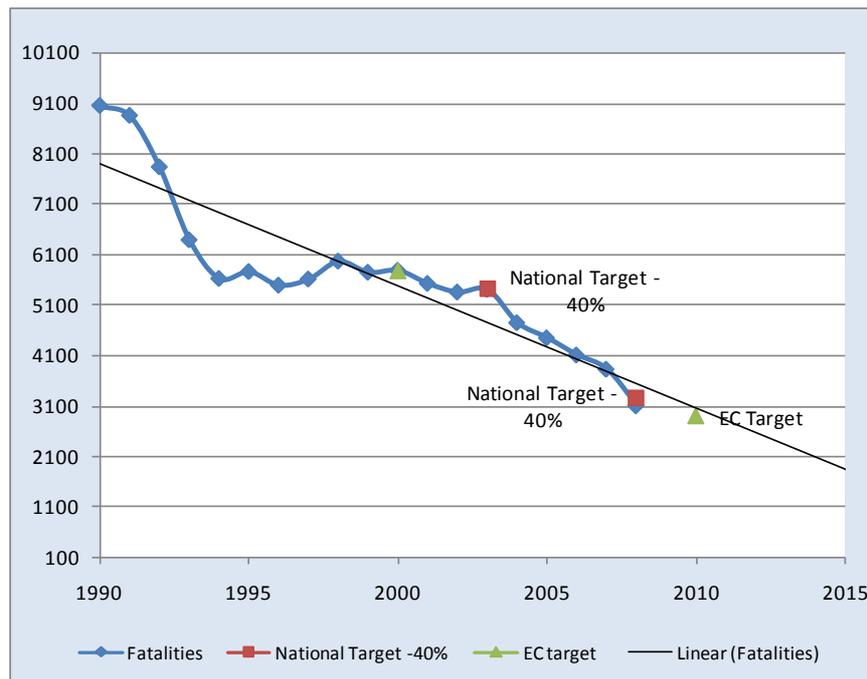
Figure 5. Reported fatalities by type of road, Spain - 1980, 1990, 2000 and 2008



Source: IRTAD Annual Report 2009.

The target set for 2008 under the strategic action plan was a reduction of 40% in the number of road crash fatalities compared to 2003. This ambitious target was met with a reduction of 43% achieved. If progress continues, Spain is on target to meet the EU goal of a 50% reduction in road fatalities between 2000 and 2010 (figure 6). Targets have also been set for reducing the number vulnerable road users killed and reducing serious injuries. New targets are now being set.

Figure 6. Trend in progress towards road fatality targets in Spain



Source: IRTAD Annual Report 2009.

Spain's renewed progress in improving road safety illustrates the power of adopting a more integrated approach. Safe system approaches are expected to yield benefits for countries at all stages of road safety performance and policy development. Starting with Sweden and the Netherlands, administrations from a range of countries have now adopted safe system policies including Australian States, New Zealand, Norway and most recently Malaysia, with ambitious targets for reducing deaths and serious injuries.

Table 3. Key Targets in Malaysia's Road Safety Plan for 2006-2010

Targets	Results as of 2008
Reduce the number of road deaths per 10 000 vehicles by 52.4% from 4.2 in 2005 to 2.0 in 2010	3.7
Reduce the death rate per 100 000 population from 23 in 2005 to 10 in 2010	23.5
Reduce the death rate per billion vehicle-kilometres from 18 in 2005 to 10 in 2010	17.30

Source: IRTAD Annual Report 2009.

The World Bank is actively developing safe system policies with client countries, with a focus on performance based management and the goal of achieving very large improvements in performance in a short space of time (Bliss & Breen 2008). All countries will need to adopt ambitious targets, based on adequately funded programs of intervention and backed by a safe system approach to policy, if the aspirations of the Decade of Action agreed at the Global Ministerial Conference on Road Safety in Moscow in November 2009 are to be met (UN 2009). The goal is to stabilize and then reduce the forecast level of global road deaths by 2020 (Make Roads Safe 2009).

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