

# VISIONS, TARGETS & STRATEGIES OCTOBER 1998

## SUMMARY

- **SUSTAINABLE ROAD SAFETY POLICY STARTS IN THE NETHERLANDS**  
As national, regional and local highway authorities in the Netherlands embark upon a start-up programme, ETSC examines in this second edition of 'Visions, Targets and Strategies' the basis of the Dutch sustainable road safety policy and the plans to date for its implementation.
- **SWEDEN SETS INTERIM NUMERICAL TARGET TO REDUCE ROAD DEATHS**  
In February, the Swedish Parliament set its first target within the Vision Zero strategy to reduce deaths by 50% by 2007.
- **EUROPEAN PARLIAMENT VOTES FOR NEW EU-WIDE TARGETS TO CUT ROAD DEATHS**  
In April, the European Parliament voted in favour of setting an EU-wide target to reduce deaths from 45000 to 25000 by the year 2010. At the same time as resisting pressure to propose a target, the Commission and Council have, so far, failed to restore last year's 50% EU budget cut.

## NEW ROAD SAFETY STRATEGY FOR THE NETHERLANDS

Sustainable road safety has been introduced recently as the new long term strategy in order to reach ambitious national casualty reduction targets. Currently, around 1180 lives are lost on Dutch roads every year.

## DUTCH CASUALTY REDUCTION TARGETS

To reduce deaths and injuries by 25% by 2000 compared with 1985 levels

To reduce deaths by 50% and injuries by 40% by the year 2010 compared with 1986 levels.

## WHAT IS 'SUSTAINABLE ROAD SAFETY' ?

Having much in common with the Swedish Vision Zero strategy, a sustainably safe traffic system comprises:

- Infrastructure adapted to human limitations through proper road design,
- Vehicles equipped to make the driving task easier and to offer good crash protection
- Road users who are provided with adequate information and education and, where necessary, deterred from undesirable or dangerous behaviour.

Inspired by the concept of sustainable development of the UN Brundtland Commission,

sustainable road safety acknowledges that:

- the adverse consequences of today's mobility demands should not present a burden for future generations;
- the means are available to reduce substantially the costly and largely avoidable road casualty problem;
- the traffic system designer has a key role to play in using good design to prevent accidents from occurring and to allow for the mitigation of injury severity when they occur.

While action is envisaged in a variety of fields, the main strand of the sustainable road safety strategy is to establish partnerships at national, regional and local level to re-engineer the road network over a period of time with greater emphasis on safety. The strategy has been conceived by the Institute for Road Safety Research (SWOV) and the Dutch Ministry of Transport and has been developed in co-operation with local authorities. A two-phase implementation plan has begun which, if not yet full-scale, goes some way to following through the research-based concept.

Sustainable road safety takes as its starting point the limitations of the road user to cope with the various, complex and often incompatible functions of roads making up the network.

The key objective of the sustainable road safety strategy is to manage the road network to provide compatibility between the function and its layout to encourage safe road use.

SUSTAINABLE ROAD SAFETY:

KEY FUNCTIONS OF ROAD NETWORK FOR CAR TRAFFIC

- Roads with an access function for vehicles with constant traffic interchange, comprising the vast majority of roads:
- For these roads no speeds over 30km/h in towns and villages. No speeds of over 40km/h at crossings and entries in rural areas, otherwise 60km/h may be acceptable
- Roads with a connecting function for car traffic to and from large urban districts, villages and rural areas with traffic interchange at limited sections
- For these roads, speeds should not exceed 50km/h within built-up areas and 80km/h outside. There should be separate paths for pedestrians and cyclists, dual carriageways as standard, with stream separation on the full length and speed management on major crossings and right of way.
- Roads with a flow function for through traffic without interruption
- For these roads no speeds at above 100-120 km/h with complete separation of traffic streams

The key strategy is to establish firstly the clear and unequivocal single function of any road in the network, as highlighted above, and then, through good road layout,

influence road use as follows:

#### SUSTAINABLE ROAD SAFETY:

##### STRATEGIC NEEDS OF NETWORK

- Separate incompatible road functions of:
  - access to facilities in a street
  - distributing traffic between settlements
  - ensuring rapid & uninterrupted flow
- Channel traffic into a small number of well designed arteries to minimise accident risk
- Make roads self-explanatory by means of well designed road layout
- Ensure compatibility between road function, layout and use

#### SUSTAINABLE ROAD SAFETY:

##### KEY SAFETY PRINCIPLES

- Prevent unintended use
- Prevent large discrepancies in speed, direction and mass at moderate and high speeds
- Prevent uncertainty amongst road users by making the road course more predictable

As the following Table shows, some types of road such as 'woonerf' and motorways are already being managed to these principles which accounts for their relatively low serious accident rates.

##### SERIOUS ACCIDENT RISK BY ROAD TYPE (per million mot veh. km)

	SPEED LIMIT km/h	RISK
WITHIN BUILT UP AREAS		
Woonerf' and residential roads	30	0.20
Residential roads	50	0.75
Urban arteries	50/70	1.33
OUTSIDE BUILT UP AREAS		
Local rural roads	80	0.64
Rural arteries	80	0.30
Motorroads	100	0.11
Motorways	100/120	0.07

## PHASE 1: SUSTAINABLE ROAD SAFETY

### THE START UP PROGRAMME – 1998-2001

With work in some municipalities already underway, last July, the Dutch Government together with local road administrations agreed on a start-up programme over three years. The total investment is to be 180 million ecu with 50% being contributed by national government. The annual return on investment is estimated to be around 9%. The programme includes the following measures:

1. All local authorities will start to make a distinction between areas where priority can be given to residential, recreational and agricultural functions, which comprise 65-90% of total road length in the Dutch network, and traffic arteries which give priority to traffic flow.
2. The aim is to introduce a 30 km/h speed limit as a general rule for all built-up areas. Local authorities will be entitled to make exceptions (some roads may be given a 50 km/h or even 70 km/h limit). In 2000, a joint plan for this legislation and the appropriate conversion is expected.
3. In preparation for the introduction of this general speed limit, the 30 km/h zones will be expanded. Estimates show that two thirds of the road network within built-up areas can be included in such zones within the near future. Local authorities have agreed that to include 50% by 2001.
4. A start will be made to transform about 3000km of rural areas into 60km/h zones with the aim of reducing large speed differentials.
5. Rights of way will be established in accordance with the distinction between the main traffic arteries and residential roads.
6. The National government will introduce a right of way for cyclists coming from the right. It is anticipated that the introduction of this will need to be intensive, since Dutch drivers are not used to giving way to cyclists and moped. This is going to need extremely careful monitoring to ensure that safety is not adversely affected.
7. Mopeds will be prohibited from cycle paths along 50km/h roads, but mandatory moped/cyclist paths on 80km/h roads will be established to reduce large speed differences.
8. Before the end of 2000 all road authorities will make a classification of the network according to guidelines based on sustainable safety principles.
9. Road safety audit will be introduced in 1998, but not yet on a mandatory basis as in Denmark and the UK.
10. Public information campaigns to support the introduction of sustainable safety will take place as well as improvements in police enforcement.

Large scale demonstration projects are currently underway in four regions of the Netherlands - in West-Zeeuwsch-Vlaanderen, Oosterbeek, Grubbenvorst, and Overijssel - to illustrate the potential of sustainable road safety.

### BEYOND 2000

A second phase programme to 2010 will be agreed between local and national

government, and will determine the future level of investment.

The Institute for Road Safety Research (SWOV) has estimated that full-scale implementation of sustainable road safety would cost around 27 billion ecu. Based on the experience already emerging from the demonstration projects, SWOV estimates that 13.5 billion ecu over 30 years could produce a 60% reduction in annual road casualties.

With the annual socio-economic cost of road accidents in The Netherlands estimated currently at around 5.54 billion ecu, an excellent annual return on investment of 9% is predicted. This represents twice the usual 4% return from other large infrastructure projects.

*For further information on the Dutch Policy contact: Steven Schepel: Fax: + 31 70 351 64 11*

#### ETSC COMMENT

Like the Swedish Vision Zero approach, the Dutch concept moves away from the traditional emphasis in road safety work of training and exhorting road users to behave better in traffic to concentrating on how the whole system can operate more safely through better design and management.

While the safety principles which form the basis of sustainable safety are well established, it is the extent to which these are to be systematically applied which makes this a particularly exciting policy development.

With a tradition of pioneering developments in the safety of residential areas, such as the 'woonerf' in the 1970s, the Netherlands are again leading the way with their new and well-developed strategy for urban safety management.

For it is the case that in most residential areas in all Member States, there is currently imbalance between the mobility of vehicle users and the safety of pedestrians and cyclists, many of whom are young children or older road users.

The Dutch sustainable safety policy together with the Swedish Vision Zero policies which are both based on limiting access, managing speed and encouraging highest levels of car crash protection through their involvement in the EuroNCAP programme are setting new standards for progressive road safety work in Europe.

#### SWEDEN SETS NUMERICAL TARGET TO REDUCE ROAD DEATHS

On 9th October 1997, the Swedish Parliament passed legislation incorporating Vision Zero as the long term goal for traffic safety.

"... the long term goal for road traffic safety shall be that no one shall be killed or seriously injured as the result of an accident within the road transport system 'Vision Zero' and that the design and functioning of the road transport system shall be

adapted to the requirements resulting from this ruling.'

(See Visions, Targets and Strategies 1, ETSC for report on Vision Zero).

Along with The Netherlands, Sweden is in the top five best performing countries in road safety. However, in the past five years an average of 600 people have been killed and between 60,000 to 80,000 injured every year in road accidents.

Earlier this year, and following the national practice of numerical target setting to reduce road casualties Sweden agreed the first interim numerical target for Vision Zero.

#### SWEDISH CASUALTY REDUCTION TARGET

- To reduce deaths by at least 50% by 2007 compared with 1996 levels

The target concentrates for the moment on fatality reduction since the Swedish National Roads Administration is currently examining the definition of 'serious injury'. The aim is to better align the concept of serious injury with protracted periods of health impairment, the eradication of which is the objective of Vision Zero. Following re-definition, the Government will set an interim numerical target for serious injury reduction.

#### Safety performance goals will be set for different parts of traffic system

It is the intention of the Swedish Transport Ministry to set goals for the various elements of the traffic system. In addition to the continued use of performance targets for compliance with key traffic rules which are particularly important for safety.

Recognising the vital contribution that safe infrastructure and safe vehicles can make, Sweden plans interim quantitative safety targets for:

- infrastructure based on the division of the road network into different road traffic safety standards.
- newly registered vehicles as well as the existing vehicle fleet based on crash performance rating relative to other vehicles for occupant and other road users as well as taking account of the technical systems supporting safe vehicle use.

#### Safety impact assessment

Safety issues, like environmental issues, are to be incorporated and taken into consideration explicitly, in all operations that affect the design and functioning of the transport system.

Environmental and traffic safety programmes are now being drawn up by the Swedish National Roads Administration for the period 1998-2007.

#### ETSC comment

ETSC very much welcomes Sweden's continued adherence to numerical targets. This confirms full political commitment to effective activity for the short to medium term within Vision Zero.

Targets for road infrastructural and vehicle safety performance are exciting developments in the policy and ETSC awaits the publication of the new traffic safety programme with great interest.

ETSC is also delighted to see a commitment to introduce safety impact assessment on the Swedish agenda.

## TARGET-SETTING IN OTHER MEMBER STATES

In the next edition of Visions, Targets and Strategies, ETSC will take an in-depth look at the new UK targets to 2010 which are expected at the end of 1998. French plans to meet its new target will also be examined.

## EUROPEAN PARLIAMENT CALLS FOR EU-WIDE TARGETS

The March Plenary Session, the European Parliament adopted the road safety report drafted by Pam Cornelissen (EPP, NL.). The main elements of the Parliamentary Resolution are:

- The EU should set a numerical target to reduce deaths to a maximum of 25,000 by the year 2010;
- In the field of vehicle safety new rules are requested for safer car fronts giving protection to pedestrians and cyclists, mandatory front, rear and side underrun guards for lorries, financial support for the European New Car Assessment Programme (Euro NCAP): An amendment was accepted by the Plenary calling on the Commission to try and get a consensus amongst organisations on daytime running lights before going forward with a mandatory requirement;
- EU guidelines on road safety impact assessment, speed reduction, low cost infrastructure measures, and safety audit;
- A blood alcohol concentration maximum of 0.5 mg/ml and the prohibition of the sale of alcoholic drinks in motorway service stations;
- Legislation and best practice dissemination on speed reduction;
- A European penalty points system for driving licenses and interdiction of the use of phones whilst driving, except when they are "handsfree";
- Better enforcement of working hours and rest periods regulations for professional drivers as well as revision of these regulations;
- Improvement of emergency medical assistance;
- Establishment of a comprehensive and integrated road safety information system enabling proper monitoring of the initiatives;
- National road safety programmes on a comparable basis and an annual Commission report on factual developments and the effectiveness of the programmes, including remedial actions for problem areas;
- Stimulation of early application of technological developments in cars and infrastructures with clear safety benefits;
- Member States are asked to cooperate more, to consult on a regular basis with law enforcement agencies and to investigate the feasibility of transport

accident investigation boards:

- The Commission is requested to submit proposals to make 'sustainable' safety an integral part of sustainable mobility policy.

ETSC 1999