2 SUMMARY & CONCLUSIONS

Since 2008 the revenues of Fines and Transactions from traffic violations are lower than expected. Hence, the WODC asked APE to do an exploratory investigation on these disappointing revenues. This study consists of (1) a literature review, (2) an analysis of trends and (3) a policy analysis.

Background
In the analysis of the revenues of Fines and Transactions for traffic violations we make a distinction between (a) WAHV-sanctions, (b) transactions and (c) fines.
Most traffic violations, such as parking and speed violations fall under the so-called ‘Dutch act on the administrative enforcement of traffic regulations’ (WAHV-sanctions);
For heavier traffic violations, such as drunk driving and high speed violations, road users can get a money transaction. A transaction is offered by a criminal investigator to prevent prosecution;
Fine sanctions are given for heavy traffic violations in which WAHV-sanctions are insufficient.

Literature review
Our literature review focuses on the relationship between traffic policies, such as changes in speed limits and the price of fines, and the (payment) behavior of road users. Our main focus is on the enforcement probability and the price elasticity of fines with regard to the number of traffic violations.

The literature shows that the enforcement probability is the most important determinant on the number of traffic violations. If the enforcement probability increases the number of traffic violations declines. For example, the implementation of fixed average speed checks on the A13 led to a significant decrease in the number of traffic violations. The literature on the price elasticity of traffic fines is very limited and inconclusive. Only one empirical study shows that a 1 percent increase in the cost of fines on average leads to a 0.21 percent decrease in the number of traffic violations. This elasticity is dependent on the age and income of the offenders and the size of the fine. Most other studies show no relationship between an increase in the costs of fines and the number of traffic violations. Further research is necessary to be able to draw solid conclusions regarding the price elasticity of traffic fines.
**Analysis of trends**

We consider the period from 1994 to 2010 and distinguish between (a) WAHV sanctions, (b) transactions and (c) fines.

The number of WAHV sanctions increased by 20 percent per year from 1994 to 2001 and by 5 percent per year from 2002 to 2007. However, since 2008 the number of sanctions decreases. Speed tickets are the largest component of WAHV sanctions. In 2009, 75 percent of the WAHV sanctions consisted of speed tickets. Therefore the decline is mostly due to a lower number of such tickets. The revenue from WAHV sanctions follows roughly the same time pattern as the number does. The only difference is that the growth in revenues of WAHV sanctions is higher between 2002 and 2007. The average number of transactions and fines shows an inconsistent pattern. Remarkable is the decline in the average price of fines due to alcohol violations.

Contrary to the drop in revenues from fines the traffic law enforcement did not decrease. During 2004 to 2008 the number of police officers in the so-called ‘traffic enforcement teams’ stayed almost constant. However, it’s unclear how the number of other police officers involved in traffic enforcement developed.

**Policy analysis**

The policy analysis studies the period from 2008 to 2010. Since 2008 several policy measures have been implemented to raise the revenues out of Fines and Transactions. In April 2008 there was a 20 percent general increase in the size of traffic fines. But the revenues from this measure were disappointing. In August 2009 the ministry of justice launched a so-called ‘optimization program’ to turn this adverse trend in revenues. This program aimed at a reduction of the discrepancy between expected- and realized- revenues out of Fines and Transactions. The optimization program contains several measures such as the placement of 11 digital traffic enforcement cameras, 26 extra analog cameras and extra fixed average speed checks on highways. The revenues from this optimization program were also lower than expected.

There are several reasons for the disappointing revenues from traffic fines and transactions:

The implementation of measures was delayed. For instance, the introduction of the general increase in fines was delayed by three months.
Forecasts of revenues are not based on solid quantitative foundations. The way in which the forecasting models take account of behavioral effects of policy measures is not time-consistent;
Revenues from traffic fines and transactions are the outcome of several external factors. Most of these external factors are difficult to predict such as police strikes, extremely cold weather and technical difficulties with fixed average speed check systems;
The collaboration between organizations responsible for traffic safety (such as Rijkswaterstaat\textsuperscript{2} and national traffic enforcement teams) and organizations responsible for the revenues from fines and transactions (such as DIRR and FEZ within the ministry of Justice) is suboptimal. As a result the implementation of several measures was delayed and forecasts of revenues were not made in a consistent fashion.

Starting points for further research
The literature on the price elasticity of traffic fines is very limited and inconclusive. Therefore more extensive research should be done on the price elasticity of traffic fines and transactions and the effects of fixed average speed control systems;
The forecast method has to be made more transparent. Discrepancies between forecasts and transactions must be systematically evaluated. The empirical evidence on behavioral effects of policy measures and the price elasticity of traffic fines should be integrated in the forecast method.
Different organizations (such as DIRR, FEZ and national traffic enforcement teams) have a lot of valuable information. This information is not optimally used due to a lack of coordination between organizations. Therefore, improvement of the collaboration between different organizations is a critical factor in decreasing the discrepancy between forecast and realisation.

\textsuperscript{2} The executive body of the Dutch Ministry of Infrastructure and the Environment