A National Strategy for Safe Use of Quad Bikes in Sweden

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Introduction

The interest in quad bikes (mostly called ATVs) in Sweden is on the increase and as a result of this, so is the number of fatalities and injuries relating to quad bike usage. Quad bikes are a relatively new feature in the transport system, even if they have been used to a limited extent in agriculture, forestry and in the power industry since the mid1980s. We need therefore to improve our knowledge and understanding of quad bikes within the transport system, and as a new feature in our traffic safety work.

Those who ride on quad bikes are normally unprotected motorists, i.e., the vehicle has no protective outer shell. There are huge consequences for motorcyclists during an accident, even at low speeds. It is therefore important that we work both to prevent accidents and to reduce the risk of injury should an accident occur.

This first joint national strategy has been developed in cooperation with several important actors and coordinated by the Swedish Transport Administration. The strategy constitutes an important tool with which to plan, coordinate and develop operations to improve the safety of quad bike users.

Participants in the national strategy


Background to the strategy work

Interest in quad bikes is on the increase in Sweden. In 2012, for the first time, more quad bikes were sold than two-wheeled motorcycles. Approximately 11,000 registered quad bikes are currently sold per year. At the start of 2013, there were over 90,000 quad bikes registered as ATVs or as a motorcycle for use in traffic. To this number can be added vehicles registered as tractors or engineering vehicles and a growing number of unregister quad bikes.

There have previously been individual initiatives as well as collaborative efforts in this area. One such collaborative effort was the 2008 project conducted in the form of a “quad bike OSA” (OSA: objective findings, solutions and aims). The project was intended to gather various actors in the industry in order to improve safety for those choosing to ride quad bikes. This has led, amongst other things, to an increased level of knowledge within the area and it has provided data for use in this strategy collaboration. The possibility of including quad bike safety work in the snowmobile collaboration has also been examined. We have also examined whether quad bikes can be included in the joint motorcycle and moped strategy, which is currently limited to only applying to two-wheeled motorcycles and mopeds used on public roads.

The conclusion drawn from this examination is that the safety work with quad bikes cannot naturally be incorporated into these existing collaborative areas; they must have their own collaborative area.

Purpose

The purpose of the strategy is to improve safety for quad bike users. The strategy also aims to systematize the safety work and to increase cooperation in this area.
Goal
The goal is to cooperate with important actors to produce a joint strategy for improved quad bike safety for the period 2014–2020. The work with the motorcycle and moped strategy is used as a prototype for this. The strategy will show how the number of quad bike fatalities can be reduced by 50%, and how the number of serious injuries can, by 2020, be reduced to the 2011 level and therefore contribute to the work with the 2020 interim target.
During 2011, there were 9 quad bike fatalities according to the National Board of Forensic Medicine, with 7 of these (Swedish Transport Administration 9) taking place while driving on public roads.

Swedish Quad bike users can be roughly divided into the following groups:

- **Hobby farmers and land owners**
  In this group the owners are around 40-65 years old. They mostly use machines that are registered for all-terrain use, but road-registered machines also feature, depending on their geographical location.

- **Recreational users**
  In this group the owners are around 30-55 years old. They use mostly road-registered machines but machines registered for all-terrain use also feature.

- **Professionals**
  This group consists of people that drive Quads in their work. It is a relatively small groups and the machines are owned by the company they work for.

Prioritised operational areas
Those who ride quad bikes are normally unprotected motorists, i.e., the vehicle has no protective outer shell. This means that even at low speeds, there are major consequences for the riders. It is important that we work both to prevent accidents and to minimise the risk of injury when an accident does occur. The analysis group has shown that the total potential in the prioritised areas is sufficient to achieve a fifty per cent reduction in fatalities. Unfortunately, it is not currently possible to break down the potential reduction in fatalities and serious casualties by operational area. The measured described have been developed in the cooperative strategy work. The stakeholders describe both the measures they intend to take, either individually or in collaboration with others, and also their standpoints, based on existing knowledge.

Information
The rules concerning quad bikes are complicated, largely due to the fact that the group consists of many varying categories of vehicle. There is a great deal of ignorance regarding the rules, and the consequences of not complying with them. This ignorance is fuelled by the complexity of the rules.
There is currently a great deal of misleading marketing, conducted primarily over the Internet but also via other media, specifically targeted at children. Those who use quad bikes in their work have better opportunities to access and benefit from information, compared with recreational users.

Personal protective gear
The person operating a quad bike, regardless of the category of vehicle, is an unprotected motorist. It is therefore of particular importance that personal protective gear, in the form of a helmet, protective clothing and boots, are worn.

The eCall emergency alarm system
Quad bikes are often used on minor roads but, in certain conditions, also off-road. Even minor accidents occurring in desolate locations risk becoming serious, since rescue and care can often not be provided in time. The market is currently opening up for several different types of emergency alarm systems, “eCalls”, which can reduce the response time for care. Initial calculations conducted by the analysis group have
shown that eCall has the potential to reduce the number of road fatalities by 10 25 per cent. The potential is probably even greater concerning off-road accidents. The increased demand for and use of these systems is therefore of value.

**Speed**

According to the actors involved, it is clear that many quad bikes, especially those registered as motorcycles, are specially tuned up. The user manipulates the power restriction that is prescribed by law and with which the vehicle is equipped when delivered, or alternatively removes it. It is also currently difficult to determine whether a vehicle is specially tuned, for example at regular vehicle inspections or following an order for registration inspection. The new registration of tractor-registered quad bikes is increasing, and these vehicles are constructed for a maximum speed of 40 km/h. It is also extremely important for the safety of tractor-registered quad bikes that they are not manipulated, but retain the speed limitation with which the factory equips them.

The best data currently available to us regarding speed is the in-depth studies of road fatalities conducted by the Swedish Transport Administration and compiled by Folksam in 2013. They show that few cases of over-tuning motorcycles have been recorded. This is probably due to the fact that few checks are carried out by the police authorities in connection with fatal accidents. The analysis group’s introductory calculations indicate that compliance with speed limits has the potential to reduce the number of road fatalities by 7 per cent. To this can be added the effect of larger number of ATVs adhering to the 20km/h speed limit on roads.

**Education**

The various types of quad bikes have different driver qualification requirements. The training for motorcycle and moped licenses and conditional licenses has recently been reviewed. The training that currently exists for ATVs is, firstly, training for a conditional license, and then a commercial and non-compulsory commercial training of 20 hours in duration. There are several problems with this system, for example, that there is no training in a format that is specifically tailored for, e.g., agriculture and forestry. Within Safe Work in Forestry (Säker Skog), work is underway to create a completely new training system, based on a large number of different training modules.

**Need for research and innovation**

The prioritizations that are made shall be based on facts and scientific grounds. As mentioned in this document, knowledge about measures and their connection to road safety is lacking in many cases. Some important research and innovation areas are:

- accidents involving unregistered quad bikes
- the effects associated with a well-developed and modernized training system
- the effects associated with various roll over protection structures
- evaluations of the effects of different eCall systems

**References**


http://www.trafikverket.se/contentassets/35765812a59e483b9aeb6db6fc55a0cb/strategi_fyrhjuling_eng.pdf