

Summary:

Longer and heavier goods vehicles in Norway. Status by October 1st 2009

Till now only few truck owners and freight forwarders have used the opportunity to use EMS (European Modular System, EMS) in the trial with longer and heavier goods vehicles for road freight transport on selected roads in Norway. The reasons for not taking part in the trial are that (1) too little of the road network is allowed for the trial with EMS, (2) use of EMS does not correspond with the customers logistic solutions and (3) it requires to huge investments in new transport equipments. Traffic surveys in 150 hours at Svinesund indicate that 43 % of the 67 counted modular goods vehicles are Swedish while Danish and Polish EMS counts for 16 % each. Only six were Norwegian. A literature survey for selected EU countries indicates that except for Germany all countries conclude that the EMS gives an overall positive effect.

Background

By request from the Ministry of Transport and Communications a trial with EMS for ordinary road freight transport on selected roads in Norway is carried out in the period; June 2009 – June 2011. EMS is defined as goods vehicles with a total length up to 25.25 meter and a total weight up to 60 tons. The roads in the trial are E6, E8, E12, E18 and Rv2 from the border to Sweden and Finland to Oslo, Kongsvinger, Mo i Rana, Skibotn and Kirkenes.

The objective with the trial is to assess whether EMS gives a more efficient and environmental friendly goods transport on roads with good standard while road safety and the feeling of safety among other road users at the same time are not reduced.

Objective

The objective of this report is to summarise the status for the trial after it has been working for well over one year, i.e. by October 2009. Focus are if the trial is working as intended or if there have been some initial problems and to summarise to what extent the possibility of using EMS is employed by Norwegian truck owners and freight forwarders. In addition a literature survey based on evaluation reports and trials in selected EU countries with special emphasis on Denmark has been conducted.

Method and data

The report summarises results from seven different studies, where the first five studies deal with the Norwegian trial, while the two last studies cover European trials, evaluations and experiences:

1. Survey about use of EMS among members of The Norwegian Hauliers' Association (NLF) (truck owners), Mars-April 2009
2. Survey about use of EMS among members of the Norwegian Logistics and Freight Association (LTL), November-December 2008
3. Traffic counting of EMS at the border at Svinesund, April-May 2009
4. Review of reports on technical controls of EMS, June 2008-May 2009
5. Review of enquiries and requests to The Norwegian Public Roads Administration about the EMS trial
6. Literature study of European trials with EMS
7. Literature study of the Danish trial that runs parallel with the Norwegian

Conclusions from surveys and traffic counting

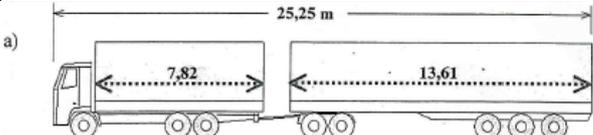
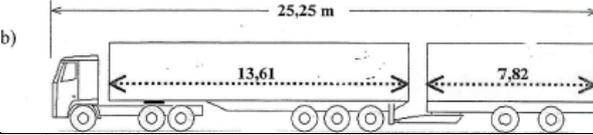
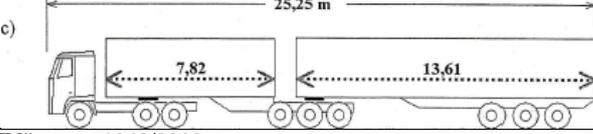
Use of EMS and different EMS types

The survey among truck owners shows that Norwegian EMS in a normal week are used for 159 trips. About $\frac{3}{4}$ of the asked truck owners answer that they do not plan to use EMS.

The routes where EMS are mostly used are E6/E18 between Svinesund and Oslo. Almost 90 % of the trips are on this route. Other trips are on Rv2 between the Swedish border and Kongsvinger and E6 between the Finnish border and Kirkenes. No respondents answer that they use EMS on E8 or E12 from the border to Mo i Rana and Skibotn.

Figure I shows the use of different EMS types among Norwegian truck owners based on the survey and the traffic counting.

Figure S.1: Use of different EMS types indicated in survey and counted at Svinesund.

EMS type	Number of truck owners that indicate to use the type	Number in the traffic counts
	9	14
	3	11
	4	42

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Most of the truck owners answer that they use EMS type a), but some of the truck owners use more than one EMS type. Type c) dominates the traffic counting with 63 % of the EMS. Type a) and type b) count for respectively 21 % and 16 %. The counts also shows that 29 (43 %) of the 67 counted modular goods vehicles are Swedish while Danish and Polish EMS counts for 16 % each. Only six of the counted EMS were Norwegian.

Among the technical controlled EMS 62 % were Swedish owned and/or had Swedish drivers.

The most frequent faults on controlled EMS are:

- EMS do not have a sign with the real total length at the rear end
- The distance between the first and the last axle is not more than 21 meter. By July 24th 2009 the distance between the first and the last axle is reduced to 19 meters
- The total length is more than 25.25 meter.

The survey among freight forwarders indicate that only 8 % of them use EMS today and further 5 % plan to use EMS later in the period of the trial. The majority of the freight forwarders do not plan to use EMS. The answers from the freight forwarders indicate that routes related to the borders at the in the South East of Norway, especially Svinesund are most popular for EMS transport.

Why EMS are used or not used

Norwegian truck owners using EMS do not think there are any problems related to manoeuvre EMS at terminals or on the roads. However, many of the truck owners not using EMS think that EMS are unsuitable for the Norwegian road network.

Among truck owners using EMS the most common employers are contract driving for industry and commerce and transport tasks for freight forwarders. The most important freight markets for Norwegian truck owners are Norway (65 %) and the rest of Scandinavia (33 %). General cargo and “other goods” are the most important Cargo types.

The most important reasons to use EMS are:

- The possibility to transport the same amount of goods with fewer goods vehicles and reduced costs
- Improved competitiveness against other road transporters.

Among truck owners not using EMS the following reasons for not using EMS are:

- Too little of the road network is allowed for the trial with EMS
- Use of EMS does not correspond with the customers logistic solutions
- The truck owners has no transport on the routes included in the trial
- Establishment of transport with EMS requires too huge investments in new transport equipments.

The Norwegian Public Roads Administration has received six applications about dispensation to drive on other road sections than included in the trial. The typical argument is that the road network is little and that it is not adjusted for the industry. In additional some companies emphasise that they wish to use EMS due to environmentally considerations.

European experiences

Table 2 summarises the founded or expected effects of introducing EMS described in 11 European studies. Except for Germany all countries conclude that the EMS gives an overall positive effect.

EMS are found to have a positive effect on climate and energy, locale environment, traffic flows and economy. EMS probably has a negative effect on the infrastructure. The effect on road safety is ambiguous.

A majority of the studies describes the same positive and negative effects of introducing EMS. However, the effects are estimated and weighted in different ways and therefore the studies give different conclusions and recommendations.

Table S.1: Effects of introduce EMS found in 11 European studies.

↓ = negative effect, ↑ = positive effect, → = none effect, - = effect not evaluated, ? = unknown effect and () = small or/and uncertain effect.

	Climate and energy	Locale environment	Objective and subjective safety	Infrastructure	Traffic flows	Economy	Total
EU	↑	↑	→	↓	-	↑	↑
S	↑	↑	↑ / ↑↓	↓	↑	↑	↑
DK	↑	↑	↑↓	↓	-	↑	↑
DE	↓	↓	→	↓	↓	-	↓
NL	↑	↑	↑ / →	-	↑	↑	↑
BE	↑	↑	?	→	↑	?	↑
UK	↑	↑	(↓)	↓	-	↑	↑
Total	↑	↑	↑↓	↓	↑	↑	↑

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Experiences from the Danish trial

The Danish EMS trial started in November 2008. Like in Norway use of EMS in Denmark has been less than expected. The following two reasons for that are stated:

- The result of the ongoing finance crisis is reduced volumes transported with trucks. Thus, truck owners have too much freight transport capacity at the moment and will not invest in new transport equipments.
- The road network allowed for EMS is selected in a way, that many truck owners cannot use EMS because they live places where EMS is not allowed. At the same time there are no places to link up EMS.

However, several initiatives have continuous been done in Denmark to improve the trial and attract attention to the trial:

- Reconstruction of the road network in the trial for 145 million DKK financed by the Danish Government to adjust the road network to EMS.
- Continuous enlargement of the road network allowed for EMS in three stages. In the third stage it is possible for private companies to make an application to be included in the trial for their own costs to adjust the road network.

- Extension of the trial period from three years to a longer indefinite period of time. This may make more truck owners “dare” to invest in new material.
- Comprehensive marketing of the trial and a lot of attention in the media.

Conclusions

The main conclusion is that it until now has been difficult to get truck owners and freight forwarders to use the possibility to use EMS on selected routes. The use of EMS has been less than expected.

Among the asked Norwegian truck owners in the survey only 13 answered that they use EMS. Only five of these truck owners state that they plan to expand their use of EMS later in the period of the trial.

Under 10 % of the truck owners that are not using EMS at the moment, state that they plan to use EMS in the future if no adjustments are made to the trial.

The majority of the counted and controlled EMS are Swedish, and only 8-9 % of the counted EMS at Svinesund are Norwegian.

Most European studies conclude that EMS will have a positive effect for the society. This confirms that it is a good idea to make a trial with EMS in Norway. However, the effect of EMS is not necessary the same in Norway as in the remaining Europe.

With the present use of EMS in Norway it is too few transporters using EMS to make a meaningful evaluation of the effects on central parameters as road safety, energy, climate and locale environment, logistics and competitiveness for industry and commerce.

If it is a goal to expand the use of EMS the following adjustments should be assessed:

- *Main routes:* Enlargement of the road network allowed for EMS
- *Connection roads:* Increased possibilities for companies and goods terminals to make an application to be included in the trial. The Norwegian Public Roads Administration has already suggested extending the road network with a number of such road sections.
- *Period:* Extension of the trial period. Due to the present global finance crisis this is relevant for testing the trial in “normal” market conditions.
- *Infrastructure:* Adjustments of the infrastructure for EMS and more places to link up EMS.
- *Information:* More “marketing” and better description of the trial.