EUROPEAN UNION AGENCY FOR RAILWAYS

Making the railway system
work better for society.

NSA Annual Report 2019

Norway

Contents

Definitions and Abbreviations

CSI	Common Safety Indicator
CSM	Common Safety Method
CST	Common Safety Target
EC	European Commission
ECM	Entities in charge of maintenance
EMM	Enforcement Management Model
ERAIL	European Railway Accident Information Links
ERTMS	European Railway Traffic Management System
EU	European Union
FTE	Full Time Equivalent
IM	Infrastructure Manager
IOD	Interoperability Directive
IOP	Interoperability
NIB	National Investigation Body
NoBo	Notified Body
NSA	National Safety Authority
OTM	On Track Machines
PRM TSI	Technical specifications for interoperability relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility
RSD	Railway Safety Directive
RU	Railway Undertaking
SAF	Safety
SMS	Safety Management System
TDD	Train Drivers Directive
TSI	Technical Specification for Interoperability
VA	Vehicle Authorisation

1. Introduction

1.1. Purpose, scope and addressees of the report

The purpose of this report is to provide information on the safety related results from 2019. It covers the main national railway network, tramways and underground are excluded from the scope. The intended addressees of this report besides the ERA are the National Investigation Body (NIB) and the Ministry of Transport and Communications.

1.2. Main conclusions on the reporting year

The overall risk picture of 2019 based on accident records and results from supervision, shows marginal changes from 2018. In 2019, the total number of reporting of incidents was about 21 000, which is 3000 lower than 2018. The number of significant accidents in 2019 is 29, which is somewhat higher than the average of years 2017 – 2018 which is 22. However, the increase is not a statistical significant.

10 of these accidents involved passenger trains, 13 freight trains, 3 while shunting and one empty train. 15 of the accidents are classified as impact with object, 13 of these teared down the overhead contact line. 6 of the accidents are classified as derailments. 1 is level crossings accidents and 2 fire accidents and 2 accidents are collisions with persons and 2 accident involved an empty train.

NSA Norway use incidents and accidents statistics when planning the supervision activities. The NSA also do an evaluation of the risks for each company. The Ministry of Transport and Communications set high-level goals for supervision. NSA Norway has established an annual supervision program to achieve these goals. The supervision program includes defined areas of priority. For 2019, these were

- Weaknesses in the systems of emergency preparedness, especially emergency preparedness analysis and plans, emergency exercises and cooperation with public emergency authorities (Mainly IM)
- Weaknesses in the systems of evaluating and controlling risks
- Weaknesses in the systems of monitoring the safety management systems
- Weaknesses in the systems for following-up of reported incidents and accidents (Mainly IM)

The supervision plan was executed with only minor adjustments during the year. In total NSA Norway executed 56 supervisions, of which 13 were audits, 38 document reviews, 2 supervision meetings, 1 inspection and 2 top management meetings.

NSA Norway continues to use its own adaptation of the management maturity model, and is expecting to gain indications on safety culture in the railway sector.

Regarding Directive (EU) 2016/795 and article 19(e) of Directive (EU) 2016/798, the directives are not yet been implemented in the Norwegian law.

When issuing new, amended and renewed safety certificates and safety authorisations, NSA Norway has noted these main issues:

- Risk analysis and risk assessment
- Competence management
- Safety management regarding outsourced activities (contractors)
- Emergency preparedness

Lastly, it is worth mentioning that in 2019 NSA Norway gave 52 authorizations to rail-/road wheel vehicles, 19 locomotives and 33 to special vehicles. 120 train driver licenses were issued.

2. English summary (about one page)

See chapter 1.2 Main conclusion on the reporting year.

3. NSA safety strategy, programs, initiatives and organizational context

3.1. Strategy and planning activities

NSA Norways Company Strategy (2017-2020) contain seven ambitions:

- We perform risk-based supervision with focus on risk, significance and effect
- We balance the use of our enforcement tools to the goals we want to achieve
- We use experience and knowledge for continuous improvement
- We are visible and proactive as independent regulatory body for railways
- We communicate clearly with the involved parties
- We participate actively in international cooperation
- We deliver the righty quality with minimum use of resources

The strategy shall help us to reach the long-term safety goals set by the Ministry of Transport and Communications, keeping a high safety level for the Norwegian railways.

The railway undertakings (RU) are responsible for the safe operation of the railways and that the current safety level, as a minimum, is kept.

Nevertheless, the Ministry of Transport and Communications set high-level goals for supervision. NSA Norway have established an annual supervision program to achieve these goals. The supervision program includes some defined areas of priority to ensure necessary improvement of important safety related topics in the industry.

The supervision program and the prioritized areas are established using a risk-based model as support for priority. We use a simplified maturity model as a basis for documentation of the NSA's assessment of the safety level of RUs and infrastructure managers (IM). These assessments are updated as part of each audit.

Related to international cooperation we have close cooperation with our neighbouring countries, Sweden and Denmark to exchange safety related experiences. We have prioritised participating in the work with CSM ALSP, as Norway already have a well-functioning incident and accident reporting system, which gives the NSA important input to our risk based supervision activities. It is of strategic importance to us to be able to get this information on a similar level also in the future. The work performed related to winter conditions and the use of composite braking blocks is also a strategically important safety issue for Norway.

To help the industry to follow the established rules and regulations we have started a more systematic guidance of the requirements as a supplement to supervision activities. This will be further developed in 2020.

NSA Norway arrange an annual safety conference to promote railway safety. In addition, mini seminars on chosen subjects as part of the guidance are regularly organized.

3.2. Safety Recommendations

All recommendations issued by the NIB, are forward to the relevant RU's and IM's. The Ministry of Transport and Communications appoints this task to the NSA. The NSA may demand that the relevant RU's

and IM's give an account on their plans for acting upon the recommendations from the NIB before the recommendation is closed. These plans of actions are also presented to NIB by NSA Norway before recommending closure to the Ministry.

Twice a year, status on all the open recommendations and recommendations closed since last reporting period are given to the Ministry. The NIB is also informed. General meetings with the NIB to share information and gained experience are also held at least twice a year.

3.3. Safety measures implemented unrelated to the recommendations

Not applicable.

3.4. Safety Organisational context

The Norwegian NSA was reorganised 1. January 2019. The supervision and authorisation processes were split in two separate departments, strengthening the independence between the two and giving better control of the resources. To ensure that relevant experience is exchanged between the two processes regular coordination has been established. Two new teams, one responsible for coordinated guidance and one responsible for coordination of international work were established to meet the strategic ambitions on better guidance and active and efficient participation in international activities.

More competition on the Norwegian railway network are giving more actors on the market. Safety Culture, handling of new interfaces and management of suppliers are strategic important issues that will require attention.

4. Safety performance

The number of fatalities in Norway is in general low. It has fluctuated between one and nine the last ten years, the average being 3,6. Most of the fatalities are in connection to level crossings and trespassing.

In 2019, the total number of reporting of incidents was about 21 000, which is 3000 lower than 2018. The number of significant accidents in 2019 is 29, which is somewhat higher than the average of years 2017 – 2018 which is 22. However, the increase is not a statistically significant.

10 of these accidents involved passenger trains, 13 freight trains, 3 while shunting and one empty train. 15 of the accidents are classified as impact with object, 13 of these teared down the overhead contact line. 6 of the accidents are classified as derailments. 1 is level crossings accident and 2 fire accidents and 2 accidents are collisions with persons and 2 accidents involved an empty train.

Reporting of derailments and incidents regarding the infrastructure has also increased. However, no clear trends can be seen in the accidents, whether in accidents increment or decrement. There is also no clear relation between the number of precursors to accidents and the number of significant accidents. Costs due to significant accident are also rather steady. However, since the accidents are different in their nature, there is no significant relationships between the costs and the number of significant accidents.

Table 1 –Summary of safety indicators in periode 2010-2019

Summary of safety indicators	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019

Number of significant accidents	20	35	19	30	28	19	16	16	25	29
Number of fatalities	9	5	1	4	1	2	3	3	5	2
Number of serious injuries to person	4	5	3	3	4	4	0	0	1	1
Number of precursors to accidents	253	134	76	168	161	172	158	139	224	142
Cost of all accidents in mill NOK (estimated)	31	33	97	126	77	73	88	81	104	106

5. EU legislation and regulation

Regarding Directive (EU) 2016/796 and article 19(e) of Directive (EU) 2016/798, the directives are not yet implemented in Norwegian law.

6. Safety Certifications, Safety Authorisations and other certificates issued by the NSA

6.1. Safety Single Certificates and Safety Authorisations

The table below show valid safety certificates and safety authorisations in Norway. The table also includes issuing date for new and amended certificates and safety authorisation:

Table 1 Valid safety certificates and safety authorizations in Norway

Company name	History	Issuing date	Type of certificate
Green Cargo AB	Renewed	22/11/2018	Type B
Grenland Rail AS	Amended	18/09/2018	Type A
Grenland Rail AS	Amended	18/09/2018	Type B
Hector Rail	Amended	15/06/2018	Type B
LKAB Malmtrafik	Renewed	17/12/2018	Type B
SJ AB	Renewed	01/06/2018	Type B
Tågåkeriet i Bergslagen AB	Renewed	13/09/2018	Type B
Norsk Jernbanemuseum	New	20/06/2017	Type A
Norsk Jernbanemuseum	New	20/06/2017	Type B
Bane NOR SF	Renewed	27/06/2019	Safety authorisation
CargoNet AS	Renewed	09/02/2016	Type A
CargoNet AS	Renewed	09/02/2016	Type B
Flytoget AS	Renewed	18/01/2016	Type A
Flytoget AS	Renewed	18/01/2016	Type B
NSB AS /VY Gruppen AS	Renewed	15/01/2016	Type A
NSB AS /VY Gruppen AS	Renewed	15/01/2016	Type B
NSB Gjøvikbanen AS/ VY Gjøvikbanen AS	Amended	20/11/2019	Type A
NSB Gjøvikbanen AS/ VY Gjøvikbanen AS	Amended	20/11/2019	Type B
Go Ahead Norge AS	New	03/072019	Type A
Go Ahead Norge AS	New	03/07/2019	Type B
Mantena AS	New	11/10/2019	Type A
Mantena AS	New	11/10/2019	Type B
Protrain Trafik AB	New	27/05/2019	Type B

When issuing new, amended and renewed safety certificates and safety authorisations, NSA Norway has noted these main issues:

- Risk analysis and risk assessment
- Competence management
- Safety management regarding outsourced activities (contractors)
- Emergency preparedness

The main strategy and procedure for issuing safety certificates and safety authorisations has not changed. However, checklists and internal documentation regarding assessment reports are continuously improved.

6.2. Vehicle Authorisations

33 authorizations are given to special vehicles. Mainly to the infrastructure manager and different entrepreneurs. 5 authorizations are given to OTM and other railway vehicles. 19 locomotives authorizations are given to locomotives.

6.3. Entities in Charge of Maintenance (ECM)

Not applicable.

6.4. Train drivers

In 2019 120 train driver licenses were issued, and the total number of valid licenses was 2249 at the end of 2019. No driver license was amended or renewed. NSA Norway suspended several licenses on a temporary basis due to medical issues, meaning that the medical requirements were not satisfied

Regarding the number of recognized training centers, these are the same as safety certificates as Norway has implemented 2011/765/EU article 5. There have been no changes in the strategy or procedure for issuing train driver licenses.

6.5. Other type of authorisation/certifications

NSA Norway may grant authorizations for placing in service new and upgraded infrastructure. The authorizations may be for the whole system or for separate subsystems.

6.6. Contacts with other National Safety Authorities

NSA Norway has a cooperation agreement on supervision and safety certification with the NSAs in Sweden and Denmark. The cooperation includes meetings and exchange of experience with respect to safety certification and supervision processes.

NSA Norway has requested information on RUs having a part A certificate in Sweden. The content of the contact and data provided is general information on how the safety management is perceived, last date of supervision, findings/issues and the time schedule for the NSA to renew part A certificates in order for NSA Norway to issue renewed part B certificates. NSA Norway has to await the part A certificate to be issued before issuing a renewed part B certificates. Likewise, NSA Norway has to await for Sweden to get the certificates registered and validated in ERADIS before the registration of the new part B certificates.

6.7. Exchange of information between NSA and railway operators

In 2019 the Norwegian NSA hosted three sector meetings and one safety conference. The topics for the sector meeting were security, risk assessment and the fourth railway package. The main purpose of these sector meetings is to focus on guidance within topics that we see that the RU/IMs struggle with.

The safety conference is an annual meeting point for the sector with the same purpose as the sector meetings, but bigger.

7. Supervision

7.1. Strategy, plan and decision making

There have been no changes in the strategy for supervision. For 2019, the bases of the supervision program were the following identified risks:

- Weaknesses in the systems of emergency preparedness, especially emergency preparedness analysis and plans, emergency exercises and cooperation with public emergency authorities (Mainly IM)
- Weaknesses in the systems of evaluating and controlling risks
- Weaknesses in the systems of monitoring the safety management systems
- Weaknesses in the systems for following-up of reported incidents and accidents (Mainly IM)

In addition, all Rus have been subject to supervision regarding sufficient insurance to cover any possible damages caused by their operation

Expected benefits for the supervision plan were:

- Investigate all Rus/IM to clarify the extend of use of risk evaluation
- To ensure that risk evaluation is the tool for controlling risks, through use of accept criteria, methods for performing risk evaluations, and that top management is using risk evaluations as a tool for making decisions
- To ensure compliance with CSM Monitoring
- To ensure sufficient following-up of reported incidents and accidents (IM)
- To ensure adequate emergency preparedness (IM)
- To ensure that all Rus have necessary insurance to cover any indemnity claims.

The supervision plan was executed with only minor adjustments during the year.

NSA Norway has identified a need to improve the system of evaluation of the supervision processes. It has also been identified a need for a more efficient process of follow up non-compliances. As a result of this, there has been an increased focus on guidance in interpretation of the regulations. There has been set up meetings open for all RUs and IM, on regularly basis for information and guidance about important topics as for example emergency preparedness and risk management system.

There is also implemented earlier warning about coercive fines for those who do not follow up within the decided time frames.

As mentioned above, NSA Norway do check the correct applications and effectiveness of the processes in Regulation 1078/2012. Amongst other NSA Norway consequently require the companies to identify the root causes of non-compliances identified in other supervisions. NSA Norway frequently also investigate follow up of incidents related to the topic of the audits including how the company has identified the root causes, executed corrective actions related to the root causes and how the effect of the actions has been evaluated.

In 2019, NSA Norway did not receive any complaints on decisions from supervision activities.

7.2. Supervision results

NSA Norway executed 56 supervisions, of which 13 were audits, 38 document reviews, 2 supervision meetings, 1 inspection and 2 top management meetings.

In general, railway safety is satisfactory provided necessary corrective actions are taken to close identified non-conformities.

Emergency preparedness

- The IM has only partly closed NCs from the last audit
- There is still a need to improve analysis as a basis for emergency plans
- As a result of the audit, the IM was given a coercive fine for not having taken actions within the set time frames.

Risk evaluation

- Performed supervisions and the investigation demonstrate that IM/Rus carry out risk evaluation because it is a requirement in the regulations more than to control risks
- The management uses the results from risk evaluations to outline their risk picture
- The majority do not have a distinct system for prioritizing and implementation of actions as a result of risk evaluations

CSM Monitoring

- All Rus where this issue was supervised perform monitoring activities, but there is a variation of to what extent strategies and indicators is defined and described

Follow-up of reported incidents and accidents

- The IMs following-up of incidents and accidents is to some extent insufficient to prevent reoccurrence, and incidents/accidents are mostly subject to analysis one by one, and not sufficiently subject to overall analysis

Insurance

- All Rus had insurance, but a few did not have sufficient coverage to meet the requirements in the legislation

7.3. Coordination and cooperation

NSA Norway have a cooperation agreement on supervision and safety certification with NSA in Sweden and Denmark. The cooperation includes meetings and exchange of experience with respect to safety certification and supervision processes.

8. Application of relevant CSMs by RUs and IMs

8.1. Application of the CSM on Safety Management System

CSM on SMS has not been applied in Norwegian legal framework yet.

8.2. Application of Regulation 402/2013 on the CSM for risk evaluation and assessment

In general, the sector, and in particular the national IM, have applied the regulation as expected. And the risk assessment of large projects is more or less satisfactorily. When it comes to smaller projects the quality of the risk assessments varies, but it is improving. The sector, in general, demonstrates satisfactorily performance within the area of risk assessments when it comes to competence. But there is still room for improvement, especially when it comes to system descriptions and consistent use of risk acceptance criterias. There is no evidence within SMSs of combined use of CSM RA and CSM Monitoring.

8.3. Application of Regulation 1078/2012 on the CSM for monitoring

The Norwegian NSA focused on the application of CSM SMS on several of the supervision activities in 2019. The sector has not matured anything within this area. There were some non-compliances regarding setting up a monitoring strategy and management commitment. Some RUs/IMs could improve their work with establishing good indicators. The CSM on monitoring overlap to some extent with existing national legislation within safety management, but the sector still struggles with working sufficiently proactive regarding safety management. The sector has a tendency to work proactive, and without any proper cooperation or coordination. There are no differences in application between smaller or bigger companies. The Norwegian will focus on this area further in 2020 with main focus on guidance.

8.4. Participation and Implementation of EU projects;

No information available.

9. Safety Culture

9.1. Safety culture evaluation and monitoring

NSA Norway continues to use its own adaptation of the management maturity model and is expecting to gain indications on safety culture in the railway sector.

9.2. Safety culture initiatives/projects

No ongoing separate work on this topic.

9.3. Safety culture communication

Some of the biggest companies focus on this topic, even though the CSM on SMS has not entered in to force in Norway. The Norwegian NSA has not had any communication activity to the stakeholders on this topic.

Annex A: Progress with Interoperability

	1. Lines excluded from the scope of IOP/SAF Directive (end of year)	
1a	Length of lines excluded from the scope of application of the IOP Directive [km]	NA
1b	Length of lines excluded from the scope of application of the SAF Directive [km]	NA
	2. Length of new lines authorized by NSA (during the reporting year)	
2a	Total length of lines [km]	NA

	3. PRM adapted stations (end of year)	
3a	PRM TSI compliant railway stations	NA
3b	PRM TSI compliant railway stations - partial TSI compliance	NA
3c	Accessible railway stations	NA
3d	Other stations	NA

	4. Train driver licenses (end of year)	
4a	Total number of valid European licenses issued in accordance with the TDD	2249
4b	Number of newly issued European licenses (first issuance)	120

	5. Number of vehicles authorized under the interoperability Directive (EU) 2008/57 (during the reporting year)	
5a	**First authorization - total**	NA
5aa	Wagon	NA
5ab	Locomotives	19
5ac	Hauled passenger vehicles	NA
5ad	Fixed or pre-defined formation	NA
5ae	Special vehicles	33
5b	**Additional authorization - total**	NA
5ba	Wagon	NA
5bb	Locomotives	NA
5bc	Hauled passenger vehicles	NA
5bd	Fixed or pre-defined formation	NA
5be	Special vehicles	NA
5c	**Type authorization - total**	NA
5ca	Wagon	NA
5cb	Locomotives	NA
5cc	Hauled passenger vehicles	NA
5cd	Fixed or pre-defined formation	NA
5ce	Special vehicles	NA
5d	**Authorizations granted after upgrade or renewal - total**	
5da	Wagon	NA
5db	Locomotives	NA
5dc	Hauled passenger vehicles	NA
5de	Fixed or pre-defined formation	NA
5df	Special vehicles	NA

6. ERTMS equipped vehicles (end of year)

6a	Tractive vehicles including trainsets equipped with ERTMS	NA
6b	Tractive vehicles including trainsets – no ERTMS	NA

7. Number of NSA staff (full time equivalent employees) by the end of year

7a	FTE staff involved in safety certification	2,0
7b	FTE staff involved in vehicle authorization	3,5
7c	FTE staff involved in supervision	5,4
7d	FTE staff involved in other railway-related tasks	0