NSA Annual Report 2015
Norway

A. INTRODUCTION

The purpose of this report is to provide information on safety related results from 2015. This report covers the main national railway network. Tramways and underground are not included in the scope of this report. The intended addressees of the report besides the ERA are the National Investigation Body (NIB) and the Ministry of Transport (MT).

B. OVERALL SAFETY PERFORMANCE AND STRATEGY

B.1 Main Conclusions on the reporting year

It is safe to travel by train in Norway. The overall risk picture for 2015 show marginal changes from 2014.

The reports show a total of 19 significant accidents. The reduction in number of accidents from 2014 are due reduction in the number of damaged overhead catenary lines, derailments and shunting accidents resulting in significant accidents.

There have been no fatalities involving passengers the last 10 years, but two persons were killed in connection with one level crossing accident in 2015. One passenger was seriously injured boarding a train (the train was not in movement).

An analysis of the accident statistics highlights the following topics:

- Level crossings
- Trespassing
- Climate related accidents (heavy rain, wind resulting in objects on the tracks, landslides and avalanches)
- Work near or on the tracks
- Incidents related to emergency preparedness (operation under conditions were barriers preventing accidents are out of operation)
- Sight distances to signaling (blocked by vegetation or unfortunate location)
- Safety zones (risks related to inadequate braking distances)

B.2 National safety strategy, program initiatives

The main principle is that the Railway Undertakings are responsible for the safe operation of the railways and that the current safety level, as a minimum, shall be kept.

The Ministry of Transport and Communications set high-level goals for supervision.

The Norwegian NSA has established a Supervision Strategy outlining the long-term priorities of the supervision activities. The strategy is supported by an annual Supervision Program, which includes some defined focus areas. The Supervision Program and the focus areas are established using a risk based model as support for priority.

The current programs are useful and have an appropriate level of detail to function as tools for priority of the focused areas. To ensure that the supervision activities add value, there has been a strong focus on risk, significance and effect on issued non-conformances.

B.3 Review of the previous year.
NSA Norway establish focus areas for supervision. We aim to have a long-term approach, so some of the focus areas may be the same over several years. Focus areas for 2015 were:

- Follow up of non-conformances and instructions from the NSA, follow up of non-conformances identified in internal audits and audits of contractors and suppliers; including:
    - Identification of causes
    - Measures taken to prevent reoccurrence
    - Evaluation of effects of corrective measures
- Operational safety
    - Driver competence
    - Vehicle maintenance
    - Safe loading
- Supplier management
- Follow-up of conditions and requirements set in Authorizations and Certificates.
- In addition we have had a specific focus on the main IM, focusing on the main risks identified.

The Supervision has been performed through system audits, inspections, supervision meetings and document reviews and follow-up of these activities. The results of the supervision activities show that the RU's and IM's generally have acceptable Safety Management Systems. Some common challenges for the industry may however be concluded from these activities:

- Efficient follow up and prevention of non-conformancies.
- Train driver training and the basis for the training schemes.
- Supplier management
- Implementation of CSM Monitoring

One safety certificate part B was revoked based on supervision activities finding continuing serious deficiencies in the operators Safety Management.

The focus on operational safety has been successful. Some serious findings related to loading were identified, and by focusing on operational issues, the NSA also becomes visible among the operational staff of the RUs and IM.

B.4 Focus areas for the next year
In the process of establishing the Supervision program for 2016, the following focus areas were decided:

- Follow up of non-conformances
- Operational safety
- Management of suppliers

- Risk evaluations

In addition, we will continue the specific programme to follow up safety management on the five most important issues for the national infrastructure manager.

The Norwegian NSA regularly arranges mini-seminars on chosen subjects as part of our guidance. An annual safety seminar is also held.

C. DEVELOPMENTS IN SAFETY PERFORMANCE

C.1 Detailed analysis of the latest recorded trends

The development in safety performance represented by some of the most important CSIs are shown in chart 1 below. The level of reporting is stabilizing on a high level. The high number of reports gives the railway undertakings (RUs) and infrastructure manager (IM) a good basis for their Safety management activities if used correctly.

In 2015 there were three fatalities and four serious injuries spread over seven accidents. All seven are third party persons. The number of fatalities in Norway are low and has fluctuated between one and nine the last seven years. The number of serious injuries in Norway are also low and has fluctuated between two and five the last seven years. There is no basis for concluding on a trend.

The number of significant accidents is lower than the average from 2006 to 2014. The previous trend of increase in accidents over the years is primarily due to collisions caused by overhead catenary lines. Approximately 94 % of lines with regular traffic on the Norwegian railway are single-track lines, this makes delays of 6 hours or more a normal consequence when there is a demolition of the overhead catenary lines. Another type of accidents that has increased during the previous years is accidents during shunting. When excluding collisions with overhead catenary lines and accidents during shunting from the data, the number of accidents has been steady for the period from 2006 until 2015. Costs due to significant accidents are also rather steady, see Table 1.

Summary of safety indicators	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Number of significant accidents	14	16	20	35	19	30	28	19
Number of fatalities	1	3	8	5	1	4	1	2
Number of serious injury to person	1	3	4	5	3	3	4	4
Number of precursors to accidents	132	193	253	134	76	168	161	172
Cost of all accidents in NOK (estimated)	31 mill	31 mill	31 mill	33 mill	97 mill	126 mill	77 mill	73 mill

Table 1: Summary of safety indicators (2008-2015)

C.2 Results of safety recommendations

A selection of the most relevant safety recommendations received and the safety measures triggered by these is shown in Table 2 below.

	Safety measure	Status
The Accident Investigation Board Norway recommends that the Norwegian Railway Authority recommend that the Norwegian National Rail Administration (Jernbaneverket) introduce requirements to provide assurance of redundancy and barriers so that checkpoints are not overlooked in connection with the performance of function tests and final inspections.	• The IM has reported that they will update their technical specifications to avoid overlooking checkpoints in connection with the performance of function tests and final inspections.	Case closed
The NIB recommends that the Norwegian Railway Authority recommend that the Norwegian National Rail Administration (Jernbaneverket) introduce fixed phrases for use in connection with testing and inspection of safety-critical functions related to the interlocking system.	• The IM has reported that they will introduce fixed phrases for use in connection with testing and inspection of safety-critical functions related to the interlocking system.	Case closed

Table 2: Implementation of safety measures triggered by safety recommendations

C.3 Measures implemented not in relation to safety recommendations

Please provide a list of the most important safety measures introduced by the NSA and information on the underlying reasons for their application.

Area of concern	Description of the trigger	Safety measure introduced
Competence	New system for train driver licence.	Unannounced control of freight trains and topic during revision.
Derailments	Overload of freight trains and reported incidents. Large reporting differences between the different companies.	Control of most freight train companies and draw hook has been a topic during all revisions.

Safe and securely loading	Timber securely loaded on freight trains and reported incidents.	Control of freight train companies.
Subcontractors	Increased use of subcontractors and increased amount of reported incidents.	Topic during revisions.

Table 3: Safety measures not triggered by safety recommendations

D. SUPERVISION

D.1 Strategy and plan(s)

Norwegian Railway Authority set its priorities and targets its activities in several steps. The annual high-level goals for the supervision activities are set by the Ministry of Transportation (the goals are normally unaltered from one year to another). Norwegian Railway Authority has established a strategy with several principles to reach these goals. A part of this strategy is the principle of risk-based supervision. There are developed criteria which ensure a transparent way of prioritizing the supervision activities on an annual and on a 5 year basis.

Each year we also set certain topics which are emphasized during the year to come. Based on the mentioned activities we prepare an annual supervision schedule which is published on www.sjt.no. In addition we ensure some capacity to handle unforeseen supervision needs.

The supervision strategy is based on the goals set by the MT as mentioned above.

The input for the risk-based priority is: Figures of train km for each RU/IM, database of accidents and incidents, results of supervision activities and the follow-up of those. Also information of organization, complexity of operations and the infrastructure used by each company is used to adjust the priority.

There are planning meetings throughout the year (typically 3 meetings) where needs for changes in the plans or needs for spontaneous supervision activities are considered.

D.2 Human resources

There are four staff members whose primary task is acting as a lead auditor. In addition approximately 18 staff members are acting as legal or technical auditors/experts in supervision activities. We do not register hours. Very roughly we estimate that 5000 hours are spent on audits and inspections annually.

We have approximately 50 members of staff as a NSA, which means that each staff member in average spends 100 hours on inspections/audits.

Approximately 6 % of each staff member's time is spent on audits/inspections.

D.3 Competence

There are set competence criteria for lead auditors, technical auditors and technical experts.

There is established a simple qualification and evaluation procedure for auditors and experts.

D.4 Decision–making

We are not able to give a statement on our decision-making criteria for how the NSA monitored, promoted and enforced compliance with the regulatory framework and on the procedure for establishing those criteria.

There were two complaints on decisions made during supervision activities in 2015, both related to one company using a driver who was not considered qualified. These two complaint-processes were not completed in 2015. (They were completed in 2016 and Norwegian Railway Authority was upheld on all counts).

D.5 Coordination and cooperation

There is a cooperation agreement on supervision and safety certification with the NSA in Sweden and Denmark.

The cooperation includes meetings and exchange of experience with respect to safety certification and supervision processes.

D.6 Findings from measures taken

There is a tendency that non-compliances are not properly dealt with: We frequently register that the same type of non-compliances are identified on later audits after corrective actions are carried out. Time limits are also often exceeded, especially in the field of sub-contracting.

E. CERTIFICATION AND AUTHORISATION

E.1 Guidance

Information regarding the application process is available in regulations, in the application form itself and as guidelines to the application form. Still the Norwegian Railway Authority (SJT) has seen the need to clarify the requirements by gathering information concerning the application process related to the safety certificate part B for foreign RUs in a separate guideline, which is published in both Norwegian and English.

SJT has also published guidance material for the other application processes. The application guidance for new, amended or renewed safety certificate parts A and B (Norwegian and foreign RUs).

SJT has published several specific guidelines that may be helpful to the RUs. These guidelines are written in Norwegian. On our web site, you may find guidance on safety management systems for smaller RUs, internal audits and supplier management.

It is useful to have an open dialog between SJT and the applicant both prior to and during the application, and SJT offer guidance through meetings, phone and mail- or e-mail-correspondence.

In Norway we have only one IM for the national rail network, and this is the reason for no written guidance material directed at IMs.

The guidance and application process are free of charge for the RUs.

E.2 Contacts with other NSAs

There is a cooperation agreement on supervision and safety certification with the NSA in Sweden.

There is also established a cooperation on supervision and safety certification with the Danish NSA, but it is not based on a formally signed agreement.

The cooperation includes meetings and exchange of experience with respect to safety certification and supervision processes.

Norwegian Railway Authority has requested information on RUs having a Part A certificate in Sweden. The main content of the contact and data provided is general information on how the safety management is perceived, last date of supervision, findings and the time plan for the NSA to renew part A certificates in order for us to issue renewed part B certificates.

We have to await the part A certificate to be issued before we can issue renewed part B certificates. Likewise, we have to await Sweden to get the certificates registered and validated in ERADIS before we can register the new part B certificates.

E.3 Procedural issues

There has been no procedural issues in 2015.

E.4 Feedback

The Norwegian NSA has established a feedback procedure for the RUs through conducting user surveys every other year from the year 2011. The survey gives the respondents the possibility to express their opinions on processing times as well as opinions on our communication and services in general. We have also established a feedback option through sending out questionnaires for participants at our different meetings and conferences held for the RU`s.

According to Norwegian legislation, it is possible to file a complaint if the applicant object to a decision made by the Norwegian NSA.

F. CHANGES IN LEGISLATION

F.1 Railway Safety Directive

The following legislation in force transposes the RSD:

Regulation 29 January 2010 No 72 concerning implementation of Commission decision 2009/460/EU on the adoption of a common safety method for assessment of achievement of safety targets
Regulation 27 October 2014 No 1344 concerning common safety method on the risk evaluation and assessment (entry into force 21 May 2015)
Regulation 10 December 2010 no. 1568 concerning railway activities on the national railway network
Regulation 11 April 2011 no. 389 concerning safety management of railway undertakings and infrastructure managers on the national railway network
Regulation 2 December 2011 No 1176 concerning implementation of Commission regulation (EU) No 1169/2010 on a common safety method for assessing conformity with the requirements for obtaining a railway safety authorisation on the national railway network
Regulation 2 December 2011 No 1177 concerning implementation of Commission Regulation (EU) No 1158/2010 on a common safety method for assessing conformity with the requirements for obtaining railway safety certificates on the national railway network
Regulation 8 May 2012 No 409 concerning maintenance for freight wagons on the national railway network
Regulation 13 Mars 2013 No 280 concerning common safety targets in the railway system
Regulation 2 July 2013 No 852 concerning implementation on a common safety method for supervision by national safety authorities after issuing a safety certificate or safety authorisation
Regulation 2 July 2013 No 853 concerning implementation on a common safety method for monitoring to be applied by railway undertakings, infrastructure managers and by entities in charge of maintenance

The transposition measures of the amendments to the RSD at the end of 2015 are also included in table 1 of annex B.

F.2 Changes in legislation and regulation

Table 2 of annex B list the relevant changes in the national regulatory framework concerning railway safety during 2015. No national regulatory framework concerning railway safety during 2015 has entered into force in Norway, except the above-mentioned regulations implementing EU legislation.

G. APPLICATION OF THE CSM ON RISK EVALUATION AND ASSESSMENT

G.1 NSA experience

Norwegian Railway Authority is of the opinion that the level for judging a change as significant is still a bit on the high side. We have, however, seen some development that may indicate a change in the right direction. We do also have some concerns about the varying quality of the significance assessments.

For changes to vehicles, the use of CSM RA is mainly controlled by TSIs and use of significance assessments is not that relevant.

It is the impression of the Norwegian Railway Authority that, especially the smaller RUs, are trying to avoid using the CSM RA and therefore assess most changes as non-significant. They do however conduct risk assessments according to their own procedures as required by national legislation.

Norwegian Railway Authority has little experience with the risk management process, involvement of AsBo and Interface management because few changes are judged by the proposer as significant.

G.2 Feedback from stakeholders

The guidelines for the Safety Management Regulations § 8-1 states that experience with CSM-RA shall be part of the annual reporting to the NSA. The "highlights" from the 2015 reports are:

- Jernbaneverket (IM) has during 2015 had five projects where assessment body has done a third party verification of the safety management, it has been evenly distributed between internal and external AsBo.
- CargoNet (RU) has a procedure that is being used to identify if the change is significant according to CSM-RA. In 2015 one change was significant and the CSM-RA process was carried out, including using an AsBo.
- NSB (RU) identified three changes to be significant according to CSM-RA, and carried out the process as described in CSM-RA.
- Hector Rail (RU) has implemented CSM-RA as the business' standard method for handling risks. This process has included training the staff, new internal instructions and an agreement with an accredited assessment body.

G.3 Revision of NSRs to take into account the EC regulation on CSM on risk evaluations and assessment

None.

H. DEROGATIONS REGARDING ECM CERTIFICATION SCHEME

No derogations to the ECM certification scheme in 2015.

ANNEX A
COMMON SAFETY INDICATORS

Electronic version sent to ERA.

ANNEX B
CHANGES IN LEGISLATION

Table 1

AMENDMENTS TO RSD	**Transposed (Y/N)**	**Legal reference**	**Date of entry into force**
Directive 2008/57/EC	Y	Regulation 16 June 2010 No 820 concerning interoperability in the railway system	16 July 2010
Directive 2008/110/EC	Y	Regulation 1 April 2011 No 351 amending regulation concerning railway safety (later inserted in Regulation 21 June 2012 No 633 concerning vehicles on the national railway network)	1 April 2011
Commission Directive 2009/149/EC	Y	Regulation 2 July 2010 nr. 1062 amending regulation concerning railway safety (later replaced by i.a. Regulation 11 April 2011 no. 389, see p. F1)	2 July 2010

Table 2

See point F2.