



National Investigation Body (NIB) Network

NIB Peer Review Report for NIB SWEDEN

Review date: 20 October 2021

Peer Review Report - Record of changes

The following table records changes during completion of individual NIB Peer Review Reports. Modifications to the template (ie modifications to the report template) are tracked through the Handbook document control record.

Version	Date	Changes
V0.1	28-10-2021	First draft report
V0.2	06-12-2021	Final report

On behalf of the Peer-review Panel

PART 1 – INTRODUCTION

This report describes a Peer Review of a National Investigation Body (NIB) undertaken to meet the requirements of Article 22.7 of the European Directive on Rail Safety dated 11 May 2016 (EU 2016/798). The Article states:

The investigating bodies, with the support of the Agency in accordance with Article 38(2) of Regulation (EU) 2016/796, shall establish a programme of peer reviews where all investigating bodies are encouraged to participate so as to monitor their effectiveness and independence.

The investigating bodies, with the support of the secretariat referred to in Article 38(2) of Regulation (EU) 2016/796, shall publish:

- (a) the common peer-review programme and the review criteria; and
- (b) an annual report on the programme, highlighting identified strengths and suggestions for improvements.

The peer review reports shall be provided to all investigating bodies and to the Agency. Those reports shall be published on a voluntary basis.

The Peer Review seeks to monitor the effectiveness and independence of a NIB by considering its organization, processes and outputs (eg accident reports, safety recommendations, annual reports). The Peer Review process also seeks to assist development of all NIBs by sharing with them strengths and suggestions for improvements identified during reviews.

The Peer Review is based on the NIB responses to a questionnaire and on a site visit in which peer reviewers visit the NIB. Details of the questionnaire and the review criteria are given in the NIB Peer Review Handbook for the year in which the review was carried out. This can be found at [\[https://www.era.europa.eu/agency/stakeholder-relations/national-investigation-bodies/nib-network-european-network-rail-accidents-national-investigation-bodies_en\]](https://www.era.europa.eu/agency/stakeholder-relations/national-investigation-bodies/nib-network-european-network-rail-accidents-national-investigation-bodies_en).

The Peer Review relies on answers given by the NIB in the questionnaire and during the site visit. The Peer Review process is not intended to fully investigate all issues covered by the questionnaire and does not address all issues in the documents used as review criteria. It is targeted at issues where the reviewers believe there will be greatest value to the NIB being reviewed and to other NIBs.

This peer review report has been prepared by the NIB peer review team in the frame of the common peer-review programme established by the investigating bodies in accordance with Article 22(7) of the Directive (EU) 2016/798 on railway safety.

NOTE: Due to the impediment of pandemic restriction the Peer-Review of NIB Sweden were carried on in 2021 instead of 2020 as originally scheduled.

The NIB peer review team examined data during the peer review of the NIB using the process described in the Peer Review Handbook. The collection of data was based on the review of some documents, internal procedures or case studies provided on a voluntary basis, as well as on interviews with management and other staff members of the NIB.

The report reflects the collective judgement of the peer-review team regarding the findings resulting from the peer-review process. However, the individual members of the peer-review team and their NIBs are not liable for the contents of the report and/or for any omissions.

The peer review report will be provided to all investigating bodies and to the European Union Agency for Railways. It is owned by the reviewed NIB and shall not be published or supplied to other parties without the prior written consent of this NIB.

PART 2 – BACKGROUND AND STATISTICS

The information in the following tables is taken from the completed questionnaire.

Table A – NIB & Review Information	
National Investigation Body (NIB)	Statens haverikommission, Swedish Accident Investigation Authority
NIB type (eg multi-modal)	Multi-modal (aviation, marine, rail, military, road, other)
Date questionnaire completed by NIB	23 June 2021
Date of site visit	20 October 2021
Date of draft report for consultation	12 November 2021
Date of comments by NIB SE	22 November 2021
Date report finalised by Peer Review Panel	
Peer Review Panel members (name/state)	1. Mircea Nicolescu (NIB RO (leader)) 2. Kurt Olsen (NIB NO) 3. Florian Gula (NIB HU)
Observers (name/state)	1. Anita Koprivnjak (Agency) 2. Leslie Mathues (NIB BE)
Route length of track in NIB's country	14 406 km (2019)
Traffic in NIB's country (train-kilometres per year)	Passenger: 127, 4 million (2019) Freight: 35,6 million (2019)

Table B – NIB Staffing

B1	Number of permanently employed rail investigators (including part time workers).	2 (+1, Head of Department)
B2	Full time equivalent number of permanently employed rail investigators.	0
B3	Full time equivalent number of administrative staff permanently employed on rail investigators.	8 (total for the whole authority). 1 is dedicated for department 1 that investigates rail occurrences.
B4	Number permanently employed rail investigators who can act as Investigator in Charge.	2 (+1, Head of Department)
B5	Are there investigators not permanently employed by the NIB who can be employed on an ad hoc basis. Briefly explain the contractual arrangements.	No

Table C – NIB Activity in the Last 3 Years (includes any joint investigations)

		Heavy rail			Metro railways		Trams		Other (trolleybus, cable car, etc.)	
		Article 20(1) accidents	National law requirement outside Article 20(1)	Discretion to investigate other events	National law requirement	Discretion to investigate other events	National law requirement	Discretion to investigate other events	National law requirement	Discretion to investigate other events
C1	In NIB scope? (delete as appropriate)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C2	Number of notifications per year	1,67 (5)	29 (87)	-	0,67 (2)	-	0,67 (2)	-	-	-
C3	Number of accidents investigated per year*	1,33 (4 for 3 years)	0,33 (1 for 3 years)	-	0,33 (1 for 3 years)	-	-	-	-	-
C4	Number of incidents investigated per year*	Not applicable to Article 20(1) investigations		-	-	-	-	-	-	-
C5	Number of full investigation reports published per year	1,33 (4 for 3 years)	0,33 (1 for 3 years)	-	0,33 (1 for 3 years)	-	-	-	-	-
C6	Average number of briefing notes (or similar short documents) published per year	-	-	-	-	-	-	-	-	-
C7	Number of recommendations produced per year	5,33 (Total 16)	3,33 (Total 10)	-	0,66 (2 for 3 years)	-	-	-	-	-

* includes accidents and incidents for which the NIB carries out significant investigation work (e.g. attends site and/or obtains significant amounts of evidence) but no full report, briefing note, etc. is published

Table D – Outcome of recommendation made during the last 5 Years

		Heavy Rail		Metro railways	Trams	Other (trolley bus, cable car, etc.)
		Article 20(1) accidents	Other investigations			
D1	Closed – adequate response	12 (92%)	7 (70%)	Answers has not been assessed yet.	0	0
D2	Closed – partly adequate response	1 (8%)	1 (10%)		0	0
D3	Closed - withdrawn	0	0		0	0
D4	Not adequate response	0 (rejected recommendations)	2 (20%)		0	0
D5	Closed – no response	0	0			
	Total	100%	100%			

Note: The table was adapted on the basis of the SHK procedure “Process Follow up on recommendations that is more detailed”

Table E - Number of joint investigations with other NIBs - Averaged over 3 Years		
E1	Deployed (Some or all work undertaken out of the office)	0
E2	Not deployed (All work undertaken from the office)	0

Table F - Number of ongoing investigations and average times to complete investigations		
		<i>At the time of completing the questionnaire</i>
F1	Investigations required by Article 20(1)	3
F2	National law requirement outside Article 20(1)	1
F3	Non-mandatory accidents and incidents	0
F4	Other investigations (e.g. class investigation)	0
F5	Average time to complete mandatory investigations (average of investigations completed in previous three years) Reports published 2018 - 2020	11,4 months
F6	Average time to complete non-mandatory investigations ((average of investigations completed in previous three years) Reports published 2018 - 2020	13,8 months

**Comments of NIB on data provided in tables A to F
and strengths and difficulties that it identifies itself**

- The NIB strengths are: it is a multimodal authority, has a good reputation in the railway community, has a well-functioning QA – system and an efficient Accident Investigation Manual

PART 3 – COMMENTS FROM PEER REVIEW PANEL

Legal framework (100 series questions in questionnaire)

- Current national legislation is generally consistent with Directive 2016/CE/798 requirements for the NIB.
- The NIB is an independent government agency under the auspices of the Ministry of Justice. The NIB is established by law and its independence is protected by the constitution. The independence of Swedish authorities is anchored in the Constitution. That means that no public authority, including the Parliament and decision-making bodies of local authorities, may interfere with decisions of an authority (e.g. the NIB) when it concerns the exercise of public authority vis-à-vis an individual or relating to the application of law.
- The DG of the NIB is appointed by the Government after an application procedure. The DG answers to the Government as a whole and cannot be dismissed during his term of service. The independence of the DG is protected by law.
- Legislation gives the NIB immediate access to the site and stipulate that the NIB may hold hearings with parties assumed able to provide information of importance to the investigation. The NIB may also confiscate and inspect documents and objects assumed relevant,
- The Accident Investigation Act (1990:712) provide that “The government may also prescribe, or decide in individual cases, that an investigation under this Act shall be conducted when an accident or incident is of a less serious nature than those indicated in § 2, but for which an investigation is still warranted from a safety perspective”.
The NIB explained that till now there was just 2 cases related to geographical reasons but not in the railway department.
The government gives the mandate to the NIB when is outside of the legislation and the NIB decide whether to open this kind of investigation and the scope of the investigation.

Type of investigations undertaken & NIB organisation (200 series questions)

- The NIB investigates occurrences as provided for in art. 20.1 (serious accidents) and 20.2 (other accidents and incidents at the discretion of the NIB).
- The NIB investigates accidents and incidents in the metro and tramways.
- The NIB is organized in 3 departments (2 for investigations and 1 for the support including financial, administrative, etc). The NIB has 4 chairs (including Director General). The chair decides whether to open an investigation at a proposal of a rail investigator and has the overall responsibility for an investigation, for strategic decisions in regard to the scope and direction of the investigation

and for the investigation being conducted in accordance with applicable law and the agency's internal regulations. The chair is also responsible for final quality assurance of status reports and the final report and for the follow-up of the NIB's safety recommendations.

- The NIB attends the NIB Network meetings, is part of the Peer Review task force, Guidance revision task force and Nordic countries group and other international initiatives.
- The NIB, on their own initiative, will be assessed by the Transport Analysis that is a government agency charged with providing decision-makers in the sphere of transport policy with sound and relevant policy advice.
- The NIB sets up internal goals and indicators in the annual "business plan" for the Authority. The NIB is targeted with yearly external audits from the Swedish National Audit Office
- The NIB has an internal evaluation of every investigation, with an opponent, four months after the report is published.

Resources (300 series questions)

- The NIB receives funding from the State budget. Its budget is set by the Parliament within the framework of the three-year rolling plan The budget is considered enough for regular investigation activities.
- Extra budget for very large accidents may be obtained, under the law conditions, from the Budgetary Reserve Fund at the Government disposal.
- The NIB has 2 full time investigators in railway field and a head of department that can act as an investigator or IIC. The investigation teams can include investigators from the other transport modes (human factors specialist).
- The law also lays down some requirements about the internal organisation as it stipulates that there must be a chair and an investigator in charge for each investigation. There is a statutory obligation about competence minimum requirements.
- There are one investigator and one chair on call 24/7. The head of department can ask investigators to go on site if it need (outside office hours).
- For tracks belonging to the national Infrastructure Manager Trafikverket there is always a person called "Person responsible for the accident site" that the NIB contacts regarding circumstances at the accident site. Other IMs have similar arrangements.
- The NIB considers that number of staff is sufficient to operate under normal circumstances (three or four "normal" railway accidents a year). Both rail investigators and the head of department can act as Investigator in charge.
- The NIB has a secure working location at its headquarters including a workshop and storage facilities

- The NIB has a MoU with Nordic NIBs. The NIB has no standing arrangements except for signalling experts. The NIB procures specialists (experts) when needed. The experts have no deploying time.

Training arrangements (400 series questions)

- National legislation prescribes that there must be accident investigator in the NIB. At least one of the accident investigators in the NIB must be a lawyer and have judicial experience. Related to railway investigators, the legislation in force prescribes that there shall be accident investigators with expertise in railway operations, railway engineering and general technical matters, as well as expertise in the population area's protection and rescue service and behavioural science qualifications.
- The NIB has a competence management process that include basic program for all employees, basic program for accident investigators, basic program with training for accident investigators adapted to the investigation area. An individually designed program for competence development can be added if needed. There is a biannual competence assessment. The annual budget is sufficient for trainings.
- The NIB takes part of training delivered by Karlstads University, ERA, NTSB and RAIB.
- The NIB facilitates for its staff professional trainings, conferences, courses, seminars, etc. There is also an internal training in Human and Organisational Factors, photography, Health and Safety etc.

Notification & decision process (500 series questions)

- The NIB receives on average 29 notifications per year. All notifications are analysed to assess the decision whether to open an investigation or not. A motivated decision including facts is issued and sent to the NSA.
- Notifications are provided by the NSA to the NIB's investigator on duty who will contact the chair of the investigation. There are established criteria that shall lead to events being reported to the NIB.
- The initial information gathering is normally conducted via telephone and an e-mail, but it may also include the on-site visit or a more extensive preliminary study following a decision by the Chair. Information gathered shall be presented in a Case Assessment Memorandum (F07 Case Assessment) to the Chair on Duty (OiB), along with a reasoned proposal for decision. The investigator on-call asks details from IM and RU.
- The chair on duty, in cooperation with the rail investigator, completes the motivated decision and after consultation with the head of department appoints the investigator in charge.
- The NIB investigates 2 to 3 accidents/incidents per year.

Evidence collection and analysis (600 series questions)

- The NIB has a Manual defining general investigation process, including subprocess information gathering that contain detailed instructions for health and safety, collaboration with other actors at an accident site, documentation of the site of the event, investigation concerning human factors, rescue operation, processing of material findings, particularities regarding investigation of rail occurrences
- The NIB has unlimited access to data and witnesses. If the NIB does not get data on site, it gets information from the police, IM and RU. The NIB always gets information from the “Person responsible for the accident site”
- As a rule, a fact-finding presentation meeting is organised when the information-gathering phase of the investigation is essentially completed and the sequence of events has been principally clarified The NIB monitors investigation progress. Every month the IIC has a presentation for the management team about the on-going investigations. The NIB has a template for that.
- A contact with victims is done by the investigator in charge and is documented in the Manual.
- The NIB has access to the police information. Police only has access to factual data gathered by the NIB, not investigation details unless they ask for it specifically.
- When the NIB decides to open an investigation, it sends an information letter to the relatives. The information shared with victims and relatives are the same as the information shared with interested parties.

Report preparation and publication (700 series questions)

- The NIB publishes ongoing investigations and finished investigations on their website. The NIB does not publish a list of notified occurrences.
- The Accident Investigation Manual contain a special chapter for guiding this activity.
- All involved parties (including victims' relatives) are invited to a fact-finding presentation meeting where the NIB would present facts that have been gathered. The NIB also sends a draft report to the involved parties so they can comment it.
- Before publication, the report is subject to an internal and external consultation process.
- The final report is also sent to the interested parties (including victims and relatives).
- The report is normally published in Swedish with summary and safety recommendations translated to English.
- The report format follows national legislation, corresponding with Directive 2004/49/EC annex V (the reports were published before the "Commission Implementing Regulation (EU) 2020/572 of 24 April 2020 on the reporting structure to be followed for railway accident and incident investigation report" was put into force).
- Reports are normally published within a year. If the investigation time is longer than one-year the NIB always considers publishing an interim report depending on when the final report will be published.
- The annual report is published before the 30th September each year.
- The NIB sends final reports and the annual report to the Agency.

Handling safety recommendations (800 series questions)

- In the last 5 years, the NIB has issued 23 safety recommendations, 2 recommendations per report on average.
- The Accident Investigation Manual contains clear guidelines for issuing safety recommendations and also for issuing urgent safety recommendations.
- The national legislation prescribes that NIB addresses safety recommendations to supervisory authorities and, if necessary, to other bodies, authorities, another EEA Member State, or Switzerland. abroad, but also to the operators, organisations or other actors. The general practice is that the safety recommendation to be addressed to the entity that are best placed to put the recommendations into practice.

In the last 3 years, recommendations in most cases (70%) are addressed to IM and RU and only 30% to the NSA. The safety recommendation, the response and the NIB's assessment of the responses are translated into English and published on the NIB's website

- 92% of safety recommendations issued for accident investigations according to Art.20(1) of the Directive has got an adequate response and 8% were closed – has got partly adequate response.
- 70% for other investigations were closed, has got an adequate response –10% were closed – has got partly adequate response and 20% has not received an adequate response.
- The NIB uses ERA guidance for writing recommendations and there is also discussion within the investigation team on the safety recommendations.

Health & safety of investigators (900 series questions)

- Standard health and safety equipment (for summer and winter) is provided to investigators by the NIB.
- Health and safety are a standing point in the annual program for work environment.
- The Accident Investigation Manual contains detailed guidelines for the risk assessment and accident site safety. Investigator in charge (or other investigator authorised to act as investigator in charge) has a responsibility of making the safety panning on-site.

Actions taken by the NIB relevant to the Peer Review findings (if any).

- Nothing to report.

Panel comments on effectiveness

- The NIB generally performs effectively.
- The NIB performs the work that is required by the national legislation. The legislation requires more investigations than required by the Directive.
- Reports are published on average within one year after the accident. If the investigation takes longer than one-year, interim statements are published on each anniversary.
- The reports examined by the Panel are thorough and technically well supported, identifying direct, underlying and systemic/root causes, contributing factors following the Annex V of the Directive that was into force at the moment of the completion of the reports.

- Recommendations for the improvement of safety and prevention of similar accidents are issued as required. Recommendations are drafted objectively and clearly identify the safety objective and the end-implementer. In the last 3 years, recommendations are addressed to the NSA, IM and RU. The answers received for recommendations are published on the NIB website.

Panel comments on independence

- The Panel considers that the NIB works in a high degree of independence, fulfilling all the criteria.

Identification of strengths

- ✓ The NIB reports have a high technical level and fully cover the content provided in the ERA Guidance on Good Reporting.
- ✓ The NIB is using an Accident Investigation Manual that provides a very good support for all investigators and guidelines on how to carry out investigations.
- ✓ All investigations are performed based on a plan and for the early stage of investigation a fact finding presentation meeting is held to which interested parties are invited.
- ✓ The NIB performs an internal evaluation of every investigation, with an opponent, four months after the report is published.
- ✓ There is a transparent process for the follow up safety recommendations. Responses received to the recommendations are published on the NIB website.
- ✓ The NIB will, on its own initiative, be assessed by the Transport Analysis that is a government agency charged with providing decision-makers in the sphere of transport policy with sound and relevant policy advice. The Transport Analysis evaluates the effects of implemented measures in the transport area and makes certain follow-ups, including the transport policy objectives. The department has overall responsibility for the authority's quality and method work.
- ✓ The NIB sets up internal goals and indicators in their annual "business plan". The NIB is targeted with yearly external audits from the Swedish National Audit Office.
- ✓ The NIB actively participates in the NIB Network, task forces, conferences, etc

Identification of areas where improvements are suggested

- ❖ The Panel suggests that the notification process should be assessed in order to avoid delays and possible lack of notifications. The Panel considers that the number of notifications is very low and questions whether the number of notifications is

proportional to the length of the infrastructure and rail traffic. The assessment of the notification process should consider that the notifications are currently provided only by the NSA.

- ❖ The NIB should consider the need for investigators to go to the accident site more often in order to maintain their competence and ensure that all facts are collected. Information received after discussion are that railways investigators go on-site on average once or twice a year.
- ❖ There is always an accident investigator on duty 24/7 that can get in contact with rail investigators when needed, The NIB has no on-duty rail investigator for immediate response outside office hours and there are no field offices.
- ❖ The Panel suggests that the process for addressing safety recommendations primarily to the party that have the mandate and possibility to address the recommendation (which could e.g. be IM and RU) without a note for the NSA should be assessed. The lack of a notification to the NSA of a safety recommendation issued can affect the role of the NSA to apply safety learning more widely. Also, NSA's monitoring the implementation of safety recommendations is not ensured.

Additional comments by the Panel (if any).

- The Panel would like to thank and show its appreciation to the NIB for volunteering to be peer-reviewed and for the openness and courtesy with which it was received.

PART 4 – COMMENTS FROM NIB

Comments by the NIB (if any).

SHK would like to thank the Panel for fruitful discussions and for the openness of the Peer Review.