

ANNUAL REPORT 2025



Air, Maritime and Railway Traffic
Accidents Investigation Agency
Department for Railway Traffic
Accidents Investigation
(NIB Croatia)

Radnicka cesta 177
HR-10000 Zagreb
Croatia

rail.safety@ain.hr
www.ain.hr

September 2026

Contents

INTRODUCTION TO THE REPORT	2
1 INTRODUCTION TO THE INVESTIGATING BODY	3
1.1 Legal Basis.....	3
1.2 Role and Aim.....	3
1.3 Organisation.....	3
1.4 Organisational flow	4
2 INVESTIGATION PROCESSES	5
2.1 Occurrence to be investigated	5
2.2 Institutions involved in investigations	5
2.3 Investigation process and approach of the NIB Croatia	6
3 INVESTIGATIONS	6
3.1 Overview of investigations completed in 2025, identifying key trends	8
Trends of completed investigations in 2025.....	8
3.2 Investigations completed and commenced in 2025.....	8
Investigations completed in 2025.....	8
Investigations commenced in 2025.....	8
3.3 Research studies (or Safety Studies) commissioned and completed in 2025	9
Safety Studies completed in 2025.....	9
Safety Studies commenced in 2025	9
3.4 Summaries of investigations completed in 2025	9
3.5 Comment and introduction or background of the investigations	9
Investigations commenced in 2025 and not followed	9
3.6 Accidents and incidents investigated during last five years (in 2021-2025).....	9
Rail investigations completed in the period 2021–2025	9
4 RECOMMENDATIONS	10
4.1 Short review and presentation of recommendations	10
Implementation of recommendations during 2014 – 2025	10
4.2 Recommendations issued in 2025.....	11
4 OTHER ACTIVITIES	14
Annex 1/3.....	16
Annex 2/3.....	22
Annex 3/3.....	23

INTRODUCTION TO THE REPORT

A National Investigating Body (NIB) operates in the Republic of Croatia as the Department for Railway Traffic Accidents Investigation at the Air, Maritime and Railway Traffic Accidents Investigation Agency (AIA) for conducting independent investigations of railway accidents and incidents according to EU and national legislation. The aim of investigating railway accidents and incidents is to improve the safety of the railway system and prevent future accidents.

Article 24(3) and 25(2) of the Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (recast) requires the National Investigating Body to publish an annual report by 30th September every year accounting for the investigations carried out in the preceding year, the safety recommendations that were issued and actions taken in accordance with recommendations issued previously and to send it to the European Union Agency for Railways (ERA).

These requirements from the Directive are also transposed into our national legislations, Article 6(4) of the Act of establishing the Air, Maritime and Railway Traffic Accidents Investigation Agency (Official Gazette Nos. 54/2013 and 96/2018) and Article 132(7)(8) of the Act on Safety and Interoperability of the Railway System (Official Gazette No. 63/2020).

1 INTRODUCTION TO THE INVESTIGATING BODY

1.1 Legal Basis

The Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (recast) is transposed in Croatia by the two national legal Acts, the Act of establishing the Air, Maritime and Railway Traffic Accidents Investigation Agency (Official Gazette Nos. 54/2013 and 96/2018) and the Act on Safety and Interoperability of the Railway System (Official Gazette No. 63/2020).

On July 16, 2026, the Ministry of the Sea, Transport and Infrastructure, through the central state internet portal for consultations with the interested public, e-Consultation, published a new Draft Proposal for the Act on Safety and Interoperability of the Railway System for the purpose of additional harmonization with the *acquis communautaire* in the process of deregulation and harmonization of national rules.

For accidents and incidents occurring from May 17, 2020, we apply Commission Implementing Regulation (EU) 2020/572 of 24 April 2020 on the reporting structure to be followed in railway accident and incident reports with all 6 titles (summary; the investigation and its context; description of the occurrence; analysis of the occurrence, where necessary in respect of individual contributing factors; conclusions and safety recommendations) and their subtitles. Summary, conclusions and safety recommendations are also translated into a second official European language (English language).

The investigations of accidents and incidents performed by NIB Croatia are independent of any other party and independent of the investigation conducted by other bodies, especially judiciary investigation and the investigation of the causes and circumstances of accidents and incidents conducted by Infrastructure Manager (IM) or Railway Undertakings (RU).

1.2 Role and Aim

The AIA was established on 29 July 2013 by the Act on Establishing of the Air, Maritime and Railway Traffic Accidents Investigation Agency (Official Gazette No. 54/13, 96/18) as a legal person with public authorities. The founder of the AIA is the Republic of Croatia and the founder's rights are exercised by the Government of the Republic of Croatia. The AIA is functionally and organizationally independent of all authorities responsible for air, maritime and railway traffic and of all legal and natural persons.

The aim of NIB Croatia investigations is to make safety recommendations, based on the findings of investigations, in order to prevent accidents and incidents in the future and improve railway safety. It is not the purpose of NIB Croatia investigation to attribute blame or liability.

1.3 Organisation

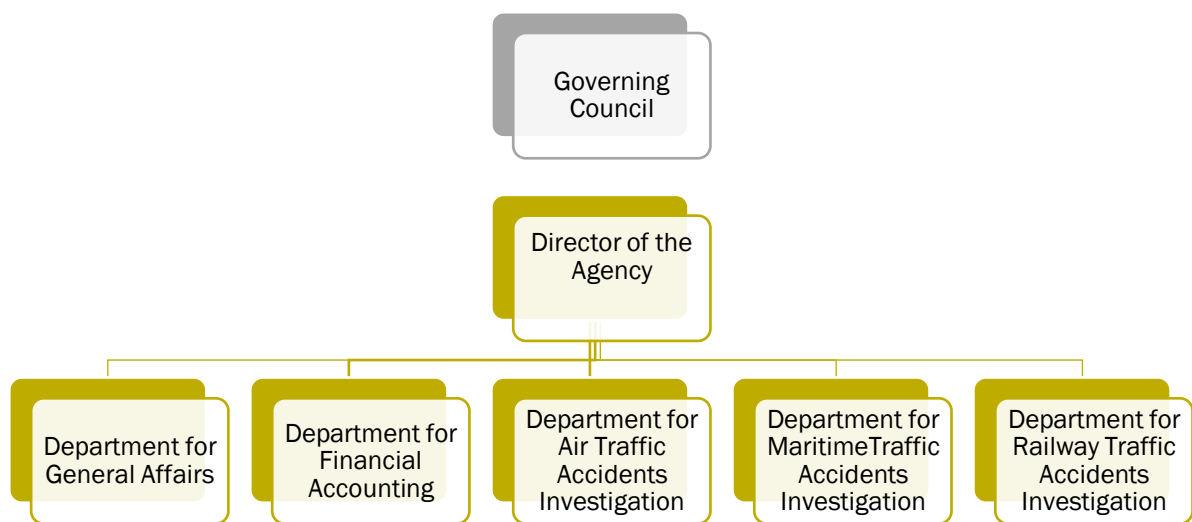
The bodies of the AIA are the Governing Council and the Director, and they are accountable to the Government of the Republic of Croatia for their work.

The AIA is managed by the Governing Council, which consists of three members appointed by the Government of the Republic of Croatia after a public competition for a period of four years, with the possibility of reappointment.

The AIA is represented and constituted by the Director, who is appointed by the Governing Council of the AIA, based on a public competition for a period of five years, with the possibility of reappointment.

The Chief investigators, each for a specific area, lead the professional work of the AIA and are responsible for the professional work of the AIA. The Chief Investigators are appointed and dismissed by the Director with the consent of the Governing Council.

Internal organization of the AIA



Following the expiration of the mandate of the previous members of the Governing Council of the AIA in the second quarter of 2025, the appointment procedure for new members is currently underway, and until its completion, the Governing Council has not yet been constituted.

In 2025, personnel changes were carried out in the NIB Croatia due to the departure of the Chief Railway Accidents Investigator. In the second quarter of 2025, a new Railway Accidents Investigator, selected through a public competition, joined the NIB Croatia. In the third quarter of 2025, an Acting Chief Railway Accidents Investigator was appointed by the Director through a public competition.

Budget funds of the AIA are granted through the Ministry of The Sea, Transport and Infrastructure budget system.

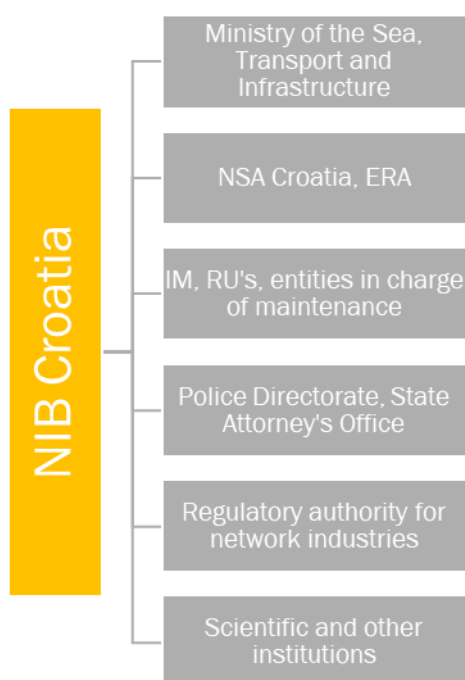
1.4 Organisational flow

The structure of the railway sector in the Republic of Croatia and relationships among the parties involved are defined in the Act on Safety and Interoperability of the Railway System (Official Gazette

No. 63/2020). The bodies responsible for the railway system in the Republic of Croatia are the Ministry of The Sea, Transport and Infrastructure, Railway Safety Agency and AIA.

The Ministry of The Sea, Transport and Infrastructure performs administrative, professional and other tasks, including implementation of the EU legislation. The Railway Safety Agency is the National Safety Authority (NSA) which activities include tasks related to safety certificates, approvals, permits and other authorizations, as well as supervision and inspection with the aim to ensure continuous compliance with railway system safety requirements, keeping prescribed registers and performing other tasks determined by national legislation and EU regulations. The AIA is independent of any party in the railway system.

Below is diagram with interaction of the NIB Croatia with other authorities and institutions in the railway investigation process.



2 INVESTIGATION PROCESSES

2.1 Occurrence to be Investigated

According to national legislation, the NIB Croatia investigates serious accidents and may investigate accidents and incidents which under slightly different conditions might have led to a serious accident, including technical failures of the structural subsystems or of interoperability constituents of the Union rail system. In making decision to investigate accident or incident we take into account: the seriousness of the accident or incident, whether it forms part of a series of accidents or incidents relevant to the system as a whole, its impact on railway safety, and requests from infrastructure managers, railway undertakings, the national safety authority or the Member States.

2.2 Institutions Involved In Investigations

Following the occurrence of railway accident or incident, various institutions may launch several independent investigations, depending on the occurrence's nature and consequences:

- IM and RU conducts accident or incident investigations within the framework of the safety management system,
- NIB Croatia investigates the causal and other factors of accidents or incidents and issues safety recommendations,
- State Attorney's Office and Police Directorate conducts immediate on-site investigations to determine whether there are elements of a criminal offense.

In order to facilitate the work of the on-site investigation procedure, a Memorandum of Understanding between the Police Directorate, State Attorney's Office and AIA was signed on July 22, 2015.

2.3 Investigation process and approach of the NIB Croatia

Investigation performed by the NIB Croatia, Department for Railway Traffic Accident Investigation, focuses on the following aspects of each occurrence:

- independent investigation of the causal and other factors of railway accidents or incidents in order to gain knowledge to prevent future accidents and incidents and to improve the safety of the railway system.

When notified about an accident or incident by an IM or RU, the NIB Croatia will analyze all preliminary information about the event to make a decision to perform an immediate on-site investigation. In cases where a notification of an event report is received and it is decided that an immediate on-site investigation is not necessary, an office investigation of the reported event may be conducted.

Within 30 days of receiving notification of an accident or incident, the NIB Croatia decides whether to initiate an investigation and informs all involved parties. Also, the NIB Croatia will inform European Union Agency for Railways (ERA) about the same within seven days from the day of making the decision to start the investigation. When deciding whether to initiate an investigation, failure to comply with the safety requirements of the railway system, as well as the seriousness and the probability of such an event occurring again, are taken into account. We also use the *Flowchart for the decision to investigate or not* from the Guidance on the decision to investigate accidents and incidents developed by the NIB Network.

The Final report is published within 12 months of the accident or incident, if it cannot be published within that timeframe, an interim statement is published on each anniversary of the accident or incident. Before the release of the Final report, all employees of the NIB Croatia have the opportunity to provide their comments and suggestions. The Draft of Reports are sent to all involved parties. The Director may return the Draft Final Report to the Chief Investigator for revision if the content of the Draft Final Report is not in accordance with the individual department's operational manuals, recommended practices and European standards regarding the conduct of air, maritime and rail accident investigations. All our Final reports are available on the AIA website and send to involved parties and ERA.

3 INVESTIGATIONS

The NIB Croatia has ensured telephone availability of railway accident investigators at any time on the basis of 7/24/365, in order to be able to react as soon as possible and perform an immediate on-site investigation. Also, the e-mail address railway.safety@ain.hr has been established in the AIA as a central location where users of railway services can submit all reports of railway accidents and

incidents, as well as all other relevant information relating to the field of railway traffic. Notification of an accident or incident can also be submitted by completing the form on the AIA website.

In 2025, we received a total of 526 notifications of occurrence in the railway system (96 notifications were received via the emergency phone, and 430 notifications via email), of which 11 notifications referred to serious accidents, 43 to accidents, 453 to incidents and 19 notifications related to suicides that the AIA does not investigate.

Following the received notifications, in 2025, a total of 10 accident/incident on-site investigations were performed, in accordance with national and EU Laws.

Out of the 11 notifications received regarding serious accidents, 2 serious accident investigations were commenced, while investigations into the remaining 9 serious accidents were not initiated because preliminary investigations determined there were no safety deficiencies in the railway system. Specifically, the fatalities involved individuals unauthorizedly and carelessly moving within the railway infrastructure area (trespass), and further investigations would not yield new findings to improve railway system safety.

On the basis of the on-site investigations and additionally collected information, 4 new investigations were commenced in 2025 (2 serious accidents, 1 accident, and 1 incident).

In 2025, we completed with Final reports and closed 4 investigations.



Data on all received notifications, on-site investigations, commenced and completed investigations, and safety recommendations, as well as accidents, incidents, and suicides based on investigative reports submitted by the IM and RU in 2025, are saved in the NIB Croatia new modular Application for data monitoring in the railway system procured through the EU project INTERREG ITALY – CROATIA 2021–2027 CROSSFREIGHT.

3.1 Overview of Investigations completed in 2025, Identifying key trends

Trends of completed Investigations in 2025

Type of accidents investigated	Number of accidents	Number of victims		Damages in € (approx.)	Trends in relation to previous year
		Deaths	Ser. injuries		
Collisions	0	0	0	<150.000	0%
Derailments	2	0	0	<150.000	0%
LC-accidents	1	1	0	<150.000	0%
Accidents to persons involving RS in motion	0	0	0	<150.000	-100%
Fire in RS	0	0	0	<150.000	0%
Other	1	0	0	<150.000	-50%

3.2 Investigations completed and commenced in 2025

Investigations completed in 2025

Date of occurrence	Title of the investigation (Occurrence type, location)	Type of occurrence	Completed (date)
14 November 2023	Derailment of freight wagons at station Zagreb Ranžirni	A	18 February 2025
08 August 2024	Derailment of a wagon as part of train No. 81292 between stations Ogulinski Hreljin and Gomirje	A	18 July 2025
18 July 2024	Untimely protection of Level Crossing “Krčeni put”	I	27 October 2025
30 September 2024	Accident at the pedestrian crossing “Buzin”	SA	27 October 2025

SA-Serious accident, A-Accident, I-Incident

Investigations commenced in 2025

Date of occurrence	Title of the investigation (Occurrence type, location)	Type of occurrence
28 January 2025	Accident to persons caused by RS in motion, between railway stop Harmica and station Savski Marof	SA
19 March 2025	Trains collision near miss between trains 61015 and 5104, at station Lekenik	I
19 March 2025	Fire on train number 4706 at station Lupoglav	A
11 August 2025	Collision between special purpose railway vehicles at station Oriovac	SA

SA-Serious accident, A-Accident, I-Incident

3.3 Research studies (or Safety Studies) commissioned and completed in 2025

Safety Studies completed in 2025

Date of commission	Title of the Study (Occurrence type, location)	Type of occurrence	Completed (date)
	none		

Safety Studies commenced in 2025

Date of commission	Title of the Study (Occurrence type, location)	Type of occurrence
	none	

3.4 Summaries of Investigations completed in 2025

See the Annex 1/3 of this Annual report.

3.5 Comment and Introduction or background of the Investigations

Investigations commenced in 2025 and not followed

Date of occurrence	Title of the investigation (Occurrence type, location)	Type of occurrence	Reason of non-following or suspension of investigations	Who, why, when (decision)
	none			

3.6 Accidents and Incidents Investigated during last five years (in 2021-2025)

Rail Investigations completed in the period 2021-2025

Accidents investigated		2021	2022	2023	2024	2025	TOTAL
Serious accidents	Train collision	0	1	1	0	0	2
	Train collision with an obstacle	0	0	0	0	0	0
	Train derailment	0	0	0	0	0	0
	Level-crossing accident	1	1	0	0	1	3
	Accident to person caused by RS in motion	0	1	1	0	0	2
	Fire in RS	0	0	0	0	0	0
	Involving dangerous goods	0	0	0	0	0	0
	Other	0	0	0	0	0	0
Accidents	Train collision	0	0	1	0	0	1
	Train collision with an obstacle	0	0	0	0	0	0
	Train derailment	3	1	0	0	2	6
	Level-crossing accident	2	1	1	1	0	5
	Accident to person caused by RS in motion	0	0	0	1	0	1
	Fire in RS	1	0	0	0	0	1
	Involving dangerous goods	0	0	0	0	0	0
	Other	0	0	1	0	0	1
Incidents		2	1	0	2	1	6
TOTAL		9	6	5	4	4	28

4 RECOMMENDATIONS

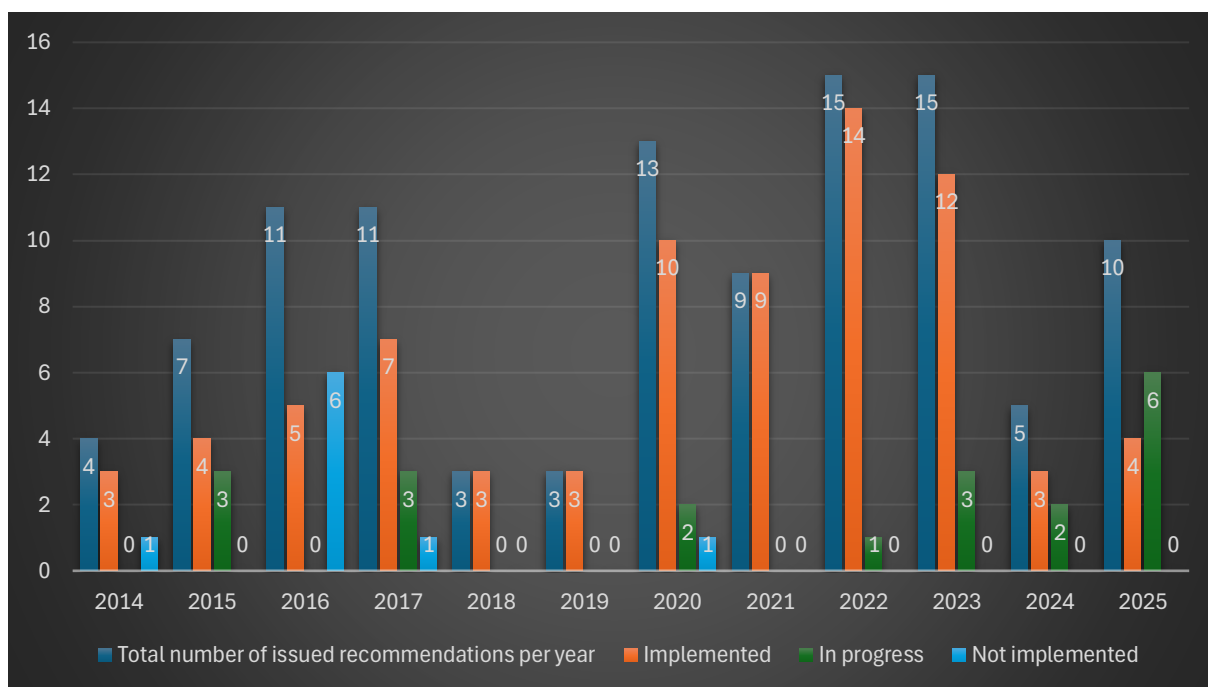
4.1 Short review and presentation of recommendations

The safety recommendations issued by the NIB Croatia are aimed to improve safety and prevent other similar accidents or incidents. Safety recommendations are addressed to the NSA Croatia and other competent authorities or involved parties.

Implementation of recommendations during 2014 – 2025

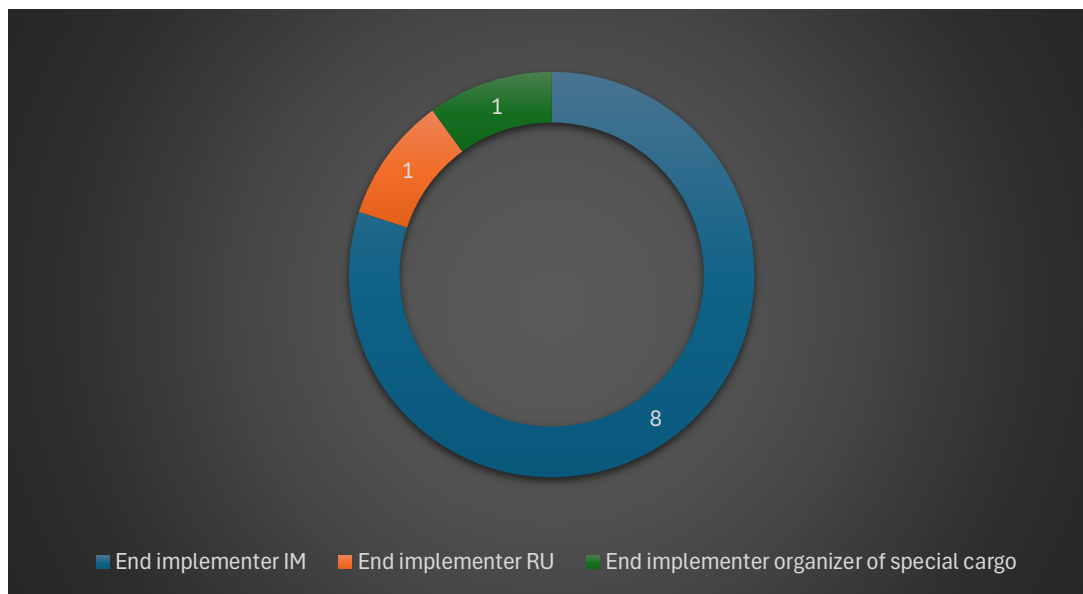
Recommendations issued		Recommendation implementation status					
		Implemented		In progress		Not implemented	
Year	[No.]	[No.]	[%]	[No.]	[%]	[No.]	[%]
2014	4	3	75%	0	0%	1	25%
2015	7	4	57%	3	43%	0	0%
2016	11	5	45%	0	0%	6	55%
2017	11	7	64%	3	27%	1	9%
2018	3	3	100%	0	0%	0	0%
2019	3	3	100%	0	0%	0	0%
2020	13	10	77%	2	15%	1	8%
2021	9	9	100%	0	0%	0	0%
2022	15	14	93%	1	7%	0	0%
2023	15	12	80%	3	20%	0	0%
2024	5	3	60%	2	40%	0	0%
2025	10	4	40%	6	60%	0	0%
TOTAL	106	77	73%	20	19%	9	8%

The below diagram shows the ratios of the total number of issued safety recommendations to those implemented, in progress and not implemented:



4.2 Recommendations Issued In 2025

In 2025, we issued a total of 10 safety recommendations, 8 were directed to the infrastructure manager, 1 to railway undertakings, and 1 to the organizer of special cargo:



No. of the recommendation: SR 1/25	
Date of occurrence	Title of the investigation
14 November 2023	Derailment of freight wagons at station Zagreb Ranžirni
Addressed to the NSA The Infrastructure Manager should revise the “Instructions for work on the humps operation” with regard to the operating procedures for manoeuvring when pushing trains in the Sub-hump zone.	
STATUS: In progress (IM - HŽ Infrastruktura Ltd.)	

No. of the recommendation: SR 2/25	
Date of occurrence	Title of the investigation
08 August 2024	Derailment of a wagon as part of train No. 81292 between stations Ogulinski Hreljin and Gomirje
Addressed to the Zagrebtrans d.o.o. The company Zagrebtrans d.o.o., as the transport organizer and owner of wagon for transport of special cargo, should ensure an accurate specification of the work procedures and tasks of its workers who monitor the transport of cargo on the wagon in order to achieve safe performance of the transport process and coordinated communication of workers during the transport of special consignments.	
STATUS: Implemented (organizer of special cargo - Zagrebtrans d.o.o.)	

No. of the recommendation: SR 3/25	
Date of occurrence	Title of the investigation
18 July 2024	Untimely protection of Level Crossing “Krčeni put”
Addressed to the NSA	

Based on the results of this investigation, as well as additional considerations in all conclusions of the ID-3 investigation reports referred to in point 4.5., the infrastructure manager (HŽI) should automate the activation of the LC's "Krčeni put" and "Rade Končar" within 18 months in order to enable safer traffic of railway and road vehicles on the section with very intensive railway traffic and extremely frequent traffic of road vehicles, and to reduce the risks of human activity due to handling their security.

STATUS: In progress (IM - HŽ Infrastruktura Ltd.)

No. of the recommendation: SR 4/25

Date of occurrence	Title of the investigation
18 July 2024	Untimely protection of Level Crossing "Krčeni put"

Addressed to the NSA

After automation, the Infrastructure Manager (HŽI) should also consider the possibility of initiating a procedure to resolve the above-mentioned level crossings (deniveling), which is the only permanent and safe solution due to the increased number of crossing users and traffic congestion.

STATUS: In progress (IM - HŽ Infrastruktura Ltd.)

No. of the recommendation: SR 5/25

Date of occurrence	Title of the investigation
18 July 2024	Untimely protection of Level Crossing "Krčeni put"

Addressed to the NSA

The Infrastructure Manager (HŽI) should pay more attention to additional considerations from its investigation reports (ID-3) and accelerate the process of responding to them in order to be able to manage possible changes and preventive measures as soon as possible with the aim of continuous improvement and increasing traffic safety.

STATUS: Implemented (IM - HŽ Infrastruktura Ltd.)

No. of the recommendation: SR 6/25

Date of occurrence	Title of the investigation
30 September 2024	Accident at the pedestrian crossing "Buzin"

Addressed to the NSA

The Infrastructure Manager, HŽ Infrastruktura d.o.o., should improve safety at Buzin Pedestrian Level Crossing (PLC) by additionally securing the crossing with both visual and audible signalling within 24 months. Until the aforementioned conditions are fulfilled, the infrastructure manager, HŽ Infrastruktura d.o.o., shall install a Level Crossing Warning Board at the prescribed distance in accordance with Article 67 67. of the Rulebook on Signals, Signal Signs, and Signal Markings in Railway Traffic ("Official Gazette" no. 94/2015) within 30 days.

STATUS: In progress (IM - HŽ Infrastruktura Ltd.)

No. of the recommendation: SR 7/25

Date of occurrence	Title of the investigation
30 September 2024	Accident at the pedestrian crossing "Buzin"

Addressed to the NSA

The infrastructure manager, HŽ Infrastruktura Ltd., should improve safety at the Buzin level crossing by installing a "Caution, Railway-Road Crossing" signal board in the direction from station

Zagreb-Klara towards stop Buzin, as prescribed by the Rulebook on Signals, Signal Signs, and Signal Markings in Railway Traffic, ("Official Gazette" no. 94/2015). Additionally, the trackside clearance zone, particularly the area around the signal boards, should be regularly maintained to ensure that train drivers can spot and unequivocally interpret their meaning in good time. The deadline for implementing this recommendation is 30 days.

STATUS: In progress (IM - HŽ Infrastruktura Ltd.)

No. of the recommendation: SR 8/25

Date of occurrence	Title of the investigation
30 September 2024	Accident at the pedestrian crossing "Buzin"

Addressed to the NSA

The infrastructure manager, HŽ Infrastruktura Ltd., should, through regular educational programmes, raise awareness among preschool children and pupils of all ages about the dangers of using pedestrian level crossings. This should be done by conducting more frequent campaigns during the school year, such as "The Train is Always Faster," International Level Crossing Awareness Day (ILCAD), and appropriately using posters, brochures, leaflets, and similar materials.

STATUS: Implemented (IM - HŽ Infrastruktura Ltd.)

No. of the recommendation: SR 9/25

Date of occurrence	Title of the investigation
30 September 2024	Accident at the pedestrian crossing "Buzin"

Addressed to the NSA

The infrastructure manager, HŽ Infrastruktura Ltd, should prescribe written warning signs at all pedestrian level crossings (PLC) and subsequently install them. These signs must alert users for increase caution when crossing the track due to the approach of trains, regardless of the type of crossing protection. Signs should also advise cyclists to dismount before crossing the track to raise awareness of the dangers at PLC. The written warning signs must be prescribed within 24 months and installed within 24 months from the date of prescription.

STATUS: In progress (IM - HŽ Infrastruktura Ltd.)

No. of the recommendation: SR 10/25

Date of occurrence	Title of the investigation
30 September 2024	Accident at the pedestrian crossing "Buzin"

Addressed to the NSA

Railway undertakings should emphasise to train drivers during regular training the importance of complying with Article 67 of the Rulebook on Signals, Signal Signs, and Signal Markings in Railway Traffic, ("Official Gazette" no. 94/2015).

STATUS: Implemented (all RUs)

4 OTHER ACTIVITIES

Participation in domestic and foreign activities:

- Participation in European Union Agency for Railways (ERA) activities

During 2025, the NIB Croatia participated in plenary meetings of the NIB Network organized by the European Union Agency for Railways (ERA).

By September 30, 2025, the 2024 annual report on completed investigations and issued safety recommendations was prepared and submitted to the ERA, after which it was published on our and the ERA website.

- Cooperation with the Railway Safety Agency (NSA)

During 2025, the NIB Croatia held several working meetings with representatives of the Railway Safety Agency regarding the implementation of safety recommendations.

- Participation in conferences

On October 15, 2025, the first thematic conference on railway safety in Croatia was organized by the Air, Maritime and Railway Accidents Investigation Agency, the Railway Safety Agency, and the Croatian Society of Railway Engineers at the Ministry of the Sea, Transport and Infrastructure premises in Zagreb. The aim of this conference was to present the Croatian railway safety management system, its key elements, and its practical application.

On November 24, 2025, investigators from the NIB Croatia and the Director of the AIA attended the "Rail Market Day" conference, organized by the Croatian Regulatory Authority for Network Industries (HAKOM).

- Participation in projects

On March 26–27, 2025, the General Assembly of the INTERREG ITALY – CROATIA 2021–2027 CROSSFREIGHT project was held in Rijeka. As a project partner, the Air, Maritime and Railway Accidents Investigation Agency organized meetings at the University Library in Rijeka to align development strategies and define future activities in detail, focusing on new ICT solutions and operational processes.

On October 2, 2025, the EUSAIR conference on digital strategies and solutions for improving railway operations management and better integrating port terminals and hinterlands in the Adriatic-Ionian region took place in Ravenna. Investigators from the NIB Croatia participated as part of the CROSSFREIGHT project.

- Cooperation with educational institutions

On May 6, 2025, an investigator from the NIB Croatia participated in the Career Day, Open Door, and Student Day at the Faculty of Transport and Traffic Sciences, University of Zagreb (Borongaj Campus), where students had the opportunity to learn about the work and structure of the AIA.

On May 23, 2025, at the invitation of the Technical School Zagreb, investigators from the NIB Croatia delivered a lecture to students majoring as railway traffic technicians, traction technicians – train drivers, and railway operational workers.

Training and professional development of Rail Accident Investigators:

- Applied Rail Accident Investigation Course, Cranfield University

In July 2025, an Investigator from the NIB Croatia attended and completed the investigator training course, which consisted of workshops and railway accident simulations.

- ISO 9001:2015 Internal Auditor Course

On August 28–29, 2025, organized by TÜV Nord Adriatic d.o.o., Investigators from the NIB Croatia participated in and passed the internal auditor training course.

- Safety Days webinar

On October 14, 2025, organized by the ERA, Investigators from the NIB Croatia participated in an online workshop focused on understanding the reality of the workplace in railways, a critical element for operational risk management and safety performance enhancement.

- 13th ERA Budapest workshop

On October 16, 2025, organized by the ERA, Investigators from the NIB Croatia participated in an online workshop covering the enhancement of railway safety and interoperability through the 4th Railway Package.

- The Rail Safety and Standards Board (RSSB) webinar: Train Operations

On November 25, 2025, organized by the RSSB, Investigators from the NIB Croatia participated in an online workshop focusing on ongoing challenges in train operations.

Annex 1/3

SUMMARIES OF INVESTIGATIONS COMPLETED IN 2025

Derailment of freight wagons at station Zagreb Ranžirni, on 14 November 2023

Type of occurrence:	Accident
Date and time:	14 November 2023, 09:50 a.m.
Description:	On 14 November 2023, at 09:50 a.m. on the line marked M402 Sava rasputnica-Zagreb Klara, at the Zagreb Ranžirni station, at km 003+422, an accident occurred (Figure 1). When manoeuvring the brute of train No 81214 composed of 31 wagons of the Ugpps series from P-3 track to S-15 track via a hump, the first three wagons of the Ugpps series were derailed in the direction of pushing on switch No 213.
Participants:	HŽ Infrastruktura Ltd. (IM), Rail Cargo Carrier Croatia Ltd. (RU)
Consequences:	No one was fatally injured or injured in this accident, and there was material damage to railway vehicles and railway infrastructure.
Causal factor:	- the derailment of the first three wagons of the Ugpps series (33 54 934 3108-4, 33 54 934 3112-5 and 33 54 934 3128-2) with both bogies in the direction of displacement, due to poor infrastructure i.e. track condition
Contributing factors:	- small radius of switches in the Sub-hump - the condition of the track structure was not able to withstand the prescribed axle pressure - clutch tension state within the manoeuvring composition
Systemic factor:	- no operating procedures are prescribed for manoeuvring when pushing trains in the Sub-hump zone in the 'Instructions for work on the humps operation'
Safety recommendation:	AIN/06-SR-01/2025: The Infrastructure Manager should revise the "Instructions for work on the humps operation" with regard to the operating procedures for manoeuvring when pushing trains in the Sub-hump zone.

Derailment of a wagon as part of train No. 81292 between stations Ogulinski Hreljin and Gomirje, on 08 August 2024



Type of occurrence:	Accident
Date and time:	08 August 2024, 7:35 p.m.
Description:	On August 8, 2024, at 7:35 p.m. on the line marked M202 at km 542+670, a special cargo wagon, series Uaai-z, number 83 78 997 2 001-0, which was part of train number 81292, derailed. The wagon derailed from four axles of the first bogie and from four axles of the third bogie in the direction of train movement. The train was operating between stations Podsused Tvornica and Skrad.
Participants:	HŽ Infrastruktura Ltd. (IM), HŽ Cargo Ltd. (RU), Zagrebtrans Ltd. (organizer of special cargo)
Consequences:	There were no injuries or fatalities in the accident, and minor material damage was caused to the special cargo wagon and the railway infrastructure.
Causal factor:	- the untimely return of the load to the center of the longitudinal axis of the wagon due to uncoordinated communication between workers on the special cargo wagon, which caused the wagon's center of gravity to be disturbed
Contributing factors:	- none
Systemic factor:	- none
Safety recommendation:	AIN/06-SR-02/2025: The company Zagrebtrans d.o.o., as the transport organizer and owner of wagon for transport of special cargo, should ensure an accurate specification of the work procedures and tasks of its workers who monitor the transport of cargo on the wagon in order to achieve safe performance of the transport process and coordinated communication of workers during the transport of special consignments.

Untimely protection of Level Crossing “Krčeni put”, on 18 July 2024

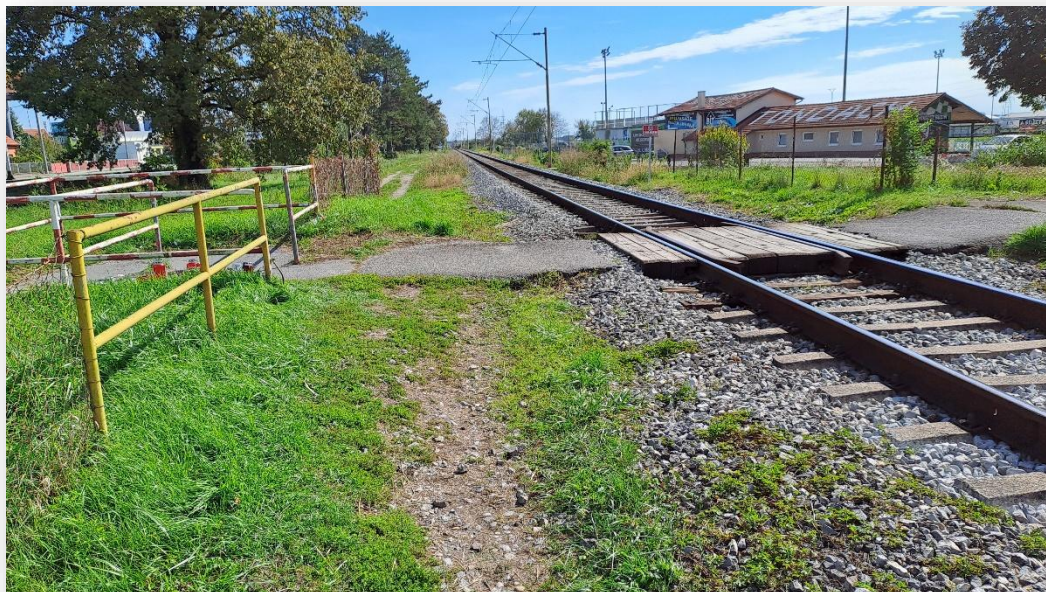


Type of occurrence:	Incident
Date and time:	18 July 2024, 12:27 p.m.
Description:	On July 18, 2024, at 12:27 p.m., the LC “Krčeni put” was untimely protected (the half-guards were in a vertical position – open) during passing of passenger train number 210. After spotting the train, the train dispatcher/LC guard turned on the LC protection. The LC “Krčeni put” (secured by sound and light signals and half-bumpers) is located between the stations Sesvete and Dugo Selo, at km 440+295, on the line M102, which is manually controlled by the train dispatcher/LC guard with a device from the stop Sesvetski Kraljevec (as well as the LC “Rade Končar” at km 439+470, while the LC “Sesvetska Selnica” at km 436+329 has automatic protection with remote control at the station Sesvete).
Participants:	HŽ Infrastruktura Ltd. (IM), HŽ Putnički prijevoz Ltd. (RU)
Consequences:	No fatalities, injuries, or material damage to the infrastructure or railway vehicles occurred in this incident.
Causal factor:	- untimely protection of the LC (the half-guards were in a vertical position – open) during passing of train number 210 due to workload that led to the mistake of the train dispatcher/LC guard
Contributing factors:	- none
Systemic factors:	- very intensive rail traffic on the railway section Sesvete – Dugo Selo as well as extremely frequent road vehicle traffic - changing jobs and places of work according to the schedule (the train dispatcher/LC guard worked at station Sesvete for the first half of July, and the second half at the stop Sesvetski Kraljevec) - failure to take the necessary preventive measures in accordance with the results of previous incident analyses
Safety recommendations:	AIN/06-SR-03/2025: Based on the results of this investigation, as well as additional considerations in all conclusions of the ID-3 investigation reports referred to in point 4.5., the infrastructure manager (HZI) should automate the activation of the LC’s “Krčeni put” and “Rade Končar” within 18 months in order to enable safer traffic of railway and road vehicles on the section with

very intensive railway traffic and extremely frequent traffic of road vehicles, and to reduce the risks of human activity due to handling their security.

AIN/06-SR-04/2025: After automation, the Infrastructure Manager (HŽI) should also consider the possibility of initiating a procedure to resolve the above-mentioned level crossings (deniveling), which is the only permanent and safe solution due to the increased number of crossing users and traffic congestion.

AIN/06-SR-05/2025: The Infrastructure Manager (HŽI) should pay more attention to additional considerations from its investigation reports (ID-3) and accelerate the process of responding to them in order to be able to manage possible changes and preventive measures as soon as possible with the aim of continuous improvement and increasing traffic safety.

Accident at the pedestrian crossing “Buzin”, on 30 September 2024

Type of occurrence:	Serious accident
Date and time:	30 September 2024, 08:41 a.m.
Description:	On 30th September 2024 at 08:41 AM, on the line M502-1 at km 416+242, between stations Zagreb Klara and Velika Gorica, passenger train number 5104 struck a cyclist who was fatally injured at the scene of accident. Train number 5104 was operating on the route Sisak Caprag – Zagreb Main Station. The cyclist approached from the urban side, passing through the staggered protective barrier without dismounting from the bicycle or verifying whether a train was approaching. While crossing the staggered protective barrier, he wore a hood that significantly restricted his field of vision, preventing him from seeing the approaching train coming from the direction of stop Buzin.
Participants:	HŽ Infrastruktura Ltd. (IM), HŽ Putnički prijevoz Ltd. (RU), the juvenile cyclist
Consequences:	The juvenile cyclist was fatally injured at the scene of the accident.
Causal factor:	- careless crossing of the railway by the cyclist; failure to confirm whether it was safe to cross - the cyclist wore a hood that considerably limited his field of view, causing him to fail to notice the train approaching from the direction of stop Buzin - due to reduced attention and concentration, and significantly restricted visibility, the cyclist was not aware of the dangerous situation posed by the approaching train number 5104
Contributing factors:	- noise from surrounding road traffic, reducing the ability of pedestrian crossing users to hear the train horn - routine habit – frequent crossing of the pedestrian level crossing (PLC) by the cyclist during periods when no trains run, possibly leading to a false sense of security - use of the PLC at a different time than on previous days, leading to an erroneous assumption that no train would be passing at that time

	- being late for training resulted in haste, which caused imprudent crossing of the PLC
Systemic factors:	- the driver of train 5104 activated the train horn once, at 735 metres and 29 seconds before reaching the pedestrian level crossing and activating the emergency brake - the level crossing warning sign was installed at a shorter distance (334 metres) than prescribed (500 metres) - lack of awareness of pedestrian crossing users regarding the dangers of crossing the track
Safety recommendations:	AIN/06-SR-06/2025: The Infrastructure Manager, HŽ Infrastruktura d.o.o., should improve safety at Buzin Pedestrian Level Crossing (PLC) by additionally securing the crossing with both visual and audible signalling within 24 months. Until the aforementioned conditions are fulfilled, the infrastructure manager, HŽ Infrastruktura d.o.o., shall install a Level Crossing Warning Board at the prescribed distance in accordance with Article 67 67. of the Rulebook on Signals, Signal Signs, and Signal Markings in Railway Traffic ("Official Gazette" no. 94/2015) within 30 days. AIN/06-SR-07/2025: The infrastructure manager, HŽ Infrastruktura Ltd., should improve safety at the Buzin level crossing by installing a "Caution, Railway-Road Crossing" signal board in the direction from station Zagreb-Klara towards stop Buzin, as prescribed by the Rulebook on Signals, Signal Signs, and Signal Markings in Railway Traffic, ("Official Gazette" no. 94/2015). Additionally, the trackside clearance zone, particularly the area around the signal boards, should be regularly maintained to ensure that train drivers can spot and unequivocally interpret their meaning in good time. The deadline for implementing this recommendation is 30 days. AIN/06-SR-08/2025: The infrastructure manager, HŽ Infrastruktura Ltd., should, through regular educational programmes, raise awareness among preschool children and pupils of all ages about the dangers of using pedestrian level crossings. This should be done by conducting more frequent campaigns during the school year, such as "The Train is Always Faster," International Level Crossing Awareness Day (ILCAD), and appropriately using posters, brochures, leaflets, and similar materials. AIN/06-SR-09/2025: The infrastructure manager, HŽ Infrastruktura Ltd., should prescribe written warning signs at all pedestrian level crossings (PLC) and subsequently install them. These signs must alert users for increase caution when crossing the track due to the approach of trains, regardless of the type of crossing protection. Signs should also advise cyclists to dismount before crossing the track to raise awareness of the dangers at PLC. The written warning signs must be prescribed within 24 months and installed within 24 months from the date of prescription. AIN/06-SR-10/2025: Railway undertakings should emphasise to train drivers during regular training the importance of complying with Article 67 of the Rulebook on Signals, Signal Signs, and Signal Markings in Railway Traffic, ("Official Gazette" no. 94/2015).

Annex 2/3

Classification of occurrences:

‘Serious accident’ means any train collision or derailment of trains resulting in the death of at least one person or serious injuries to five or more persons or extensive damage to rolling stock, the infrastructure or the environment, and any other accident with the same consequences which has an obvious impact on railway safety regulation or the management of safety; ‘extensive damage’ means damage that can be immediately assessed by the investigating body to cost at least EUR 2 million in total.

‘Accident’ means an unwanted or unintended sudden event or a specific chain of such events which have harmful consequences; accidents are divided into the following categories: collisions; derailments; level crossing accidents; accidents to persons involving rolling stock in motion; fires and others.

‘Incident’ means any occurrence, other than an accident or serious accident, affecting the safety of railway operations.

Annex 3/3

ABBREVIATIONS

AIA/AIN	Air, Maritime and Railway Traffic Accidents Investigation Agency
NIB	National Investigating Body
EU	European Union
IM	Infrastructure Manager
RU	Railway Undertaking
NSA	National Safety Authority
ERA	European Union Agency for Railways
LC	Level crossing
RS	Rolling stock
SA	Serious accident
A	Accident
I	Incident
SR	Safety Recommendation
KM	Kilometer position of the railway

COPYRIGHT

This report or any part thereof shall not be produced, reproduced or transmitted in any form without the written consent of the Air, Maritime and Railway Traffic Accidents Investigation Agency.

For all further information please contact the Air, Maritime and Railway Traffic Accidents Investigation Agency.