MINISTERIO
DE FOMENTO

National Railway Safety Authority of Spain

Annual Report

(Article 18 of Directive 49/2004)

2012

(Measures taken up to 31 December 2011)

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GOBIERNO DE ESPAÑA
MINISTERIO DE FOMENTO
SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA
SECRETARÍA GENERAL DE INFRAESTRUCTURAS
DIRECCIÓN GENERAL DE FERROCARRILES

National Safety Authority

Annual report

2012

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A.1. SCOPE OF THE REPORT

This report has been prepared by the Department of Railways (*Dirección General de Ferrocarriles*), which currently acts as the National Safety Authority in Spain, in accordance with current legislation.

It has been drafted pursuant to Article 18 of Directive 2004/49 on railway safety:

> *Each year the safety authority shall publish an annual report concerning its activities in the preceding year and send it to the Agency by 30 September at the latest. The report shall contain information on:*
>
> *a) the development of railway safety, including an aggregation at Member State level of the CSIs laid down in Annex I;*
>
> *b) important changes in the legislation and regulations concerning railway safety;*
>
> *c) the development of safety certification and safety authorisation;*
>
> *d) the results of, and experience relating to the supervision of infrastructure managers and railway undertakings.*

The information contained in this report reflects the situation at the end of the financial year 2011, i.e. **up to 31 December 2011**.

The report **sets out information relating to the General Interest Rail Network (RFIG)[1] run by the Administrador de Infraestructuras Ferroviarias (ADIF - Railway Infrastructure Manager) and by TP Ferro[2]** and the services and activities provided on that network. The scope of the report excludes:

a) metros, trams and other light rail systems,

b) networks whose operation is functionally separate from the RFIG run by the Railway Infrastructure Manager or from the other Spanish railway systems and which are only intended for urban, suburban, local or regional passenger transport services, and railway undertakings which operate only on this type of network,

c) privately owned railway infrastructure for use exclusively by the owner of the infrastructure for its own freight operations.

The report also excludes the State-owned metre-gauge rail network managed by FEVE (narrow-gauge network) which, although part of the RFIG, is not regarded as covered by Directive 2001/12/EC and, according to Spanish law, requires the approval of a specific set of rules.

1 Defined as per Article 4 of Law 39/2003 of 17 November, on the Railway Sector.

2 Stretch in the Spanish territory of the International Section between Figueres and Perpignan.

A.2. SUMMARY IN ENGLISH

This report has been prepared by the *'Dirección General de Ferrocarriles*', within the Ministry of Transport, who is the current entity in charge of the Spanish National Safety Authority functions, in accordance with the provisions set up in the legislation in force.

In general, and in relation to the different activities that the *'Dirección General de Ferrocarriles'* (DGF) exercises nowadays in its role as National Safety Authority, it is necessary to outline the main conclusions of its activity in 2011:

In relation to **safety certificates and safety authorisations**:

- A certain positioning of companies has been detected in the sector for a future liberalisation of passenger rail transport, which have initiated the steps required to obtain safety certificates.

- The DGF is trying to facilitate the implementation of Regulations 1158/2010 and 1169/2010, for which it is collaborating with railway undertakings from the initial stages of development of safety management systems.

- In addition, the DGF is conscious of the importance of adapting its functioning progressively to implement the 'Common Safety Methods for Supervision', which will be published soon.

The accident rate for this year has seen the declining trend continue both in the number of accidents and the number of victims during recent years.

As for **actions aimed at improving safety**, various actors from the sector are getting involved, carrying out the actions needed, as a consequence of events or on their own initiative.

The DGF attaches great importance to the monitoring of the level of compliance with the recommendations issued by the *'Comisión de Investigación de accidents ferroviarios'* (Rail Accident Investigation Commission*)* (Spanish NIB), by means of periodic requests for information from the addressee regarding the level of compliance.

Finally, we should like to point out that since 2008, great efforts have been made to implement Regulation (EC) No 352/2009 through the issue of national regulations. Although there are still some doubts about the interpretation of the Regulation within the sector, there is a gradual improvement in knowledge of it and its application.

In addition to all the current activities, over the next few years, the main working priorities to be emphasised must be as follows:

To consolidate a structure that allows the NSA to adequately exercise the increasing number of functions that are assigned to it, with sufficient independence from the other actors in the system.

To increase the sector's profile, by enhancing information dissemination (especially of the trends set by the European Union) and improving awareness of its expertise through the web, press releases, conferences, etc.

To give expression to the working methods that are gradually being adopted within the NSA, in internal procedures and guidelines for those involved.

To continue with monitoring the maintenance of railway vehicles, through the inspection of maintenance workshops and being prepared for the issue of certificates for the maintenance systems of the entities in charge of wagon maintenance.

To improve system supervision activities, in order to be prepared for future implementation of the 'CSM on Supervision.'

To adapt procedures for implementing the Interoperability Directive and Recommendation 2011/2017 ('DV29'), in all subsystems and vehicles.

To step up monitoring the safety recommendations of the CIAF following accidents, and monitoring of the incorporation of experiences from incidents and accidents into the procedures of railway undertakings.

To continue with plans to eliminate level crossings or to protect them, as well as fencing and removal of improper access points to the track, as they lead to the majority of the accidents involving railway equipment.

To carry on with the active participation of the Spanish NSA in the different European working groups, particularly in the European Railway Agency, by providing our suggestions and opinions.

To set up communication channels with other national authorities to enable the establishment of international traffic services.

To continue with the authority functions on the ERTMS system as arbiter among the various actors, to optimise the procedures for implementing and facilitating gradual migration to the latest versions.

B. GENERAL ASPECTS

Introduction to the report

As set out in the Railway Safety Directive 2004/49, the National Safety Authority must prepare an annual report which will be submitted to the European Railway Agency for the purpose of:

- Being used as basic information for the Agency in drawing up a biannual report on safety.
- Being published by the European Agency on its website.

The report is therefore addressed to the various players in the rail sector and to the general public through its dissemination by the European Railway Agency.

For the preparation of this report by the National Safety Authority, this Directive provides that:

> *Each year all infrastructure managers and railway undertakings shall submit to the safety authority before 30 June an annual safety report concerning the preceding calendar year.*

Accordingly, the various players in the national rail system must provide the information required by Directive 2004/49 in these reports.

As at 31 December 2011, the applicable basic Spanish legislation was:

- Law 39/2003, the Rail Sector Act, of 17 November.
- Royal Decree 2387/2004 of 30 December, approving the Rail Sector Regulations, implementing the aforementioned Act .
- Royal Decree 810/2007 of 22 June, approving the Regulations on Traffic Safety of the General Interest Railway Network.
- Royal Decree 1434/2010 of 5 November on Interoperability of the General Interest Railway Network.

Under these provisions, the functions of the National Safety Authority currently fall to the Department of Railways of the Ministry of Infrastructure and Transport.

In addition, when the data were being compiled for the drafting of this report, a number of problems were discovered which it is intended to solve in subsequent editions of this document, such as:

the experience of the undertakings providing information in their annual reports is still limited.

the definitions of indicators are still not fully consistent (Regulation 91/2003 and Annex I to Directive 2004/49).

Information on the Structure of the Rail System (Annex A)

The Network

The Spanish UIC standard and Iberian gauge General Interest Rail Network is run by the public undertaking ADIF (Railway Infrastructure Manager), except for a small border section run by TP Ferro.

Under the Franco-Spanish concession contract, infrastructure manager powers were assigned to the concessionary undertaking TP Ferro. This undertaking has been responsible for the construction and is responsible for the maintenance and traffic management of a border section of line between Figueres and Perpignan (called the 'International Section'), 19.8 km of which is located in Spain, and accordingly falling within the RFIG [General Interest Rail Network].

Annex A.1 contains various maps of the network. For more details, please see the **Network Statements** drawn up by ADIF and TP Ferro, available at the following links:

http://www.adif.es/es_ES/conoceradif/declaracion_de_la_red.shtml

http://www.tpferro.com/sites/default/files/images/Declaracion-de-Red-TPFERRO-2012.pdf

The Network Statement is the document that the infrastructure managers provide to the railway undertakings and other candidates to inform them of the characteristics of the infrastructure and terms of access to the network, ensuring transparency and non-discriminatory access.

List of railway undertakings and infrastructure managers

Infrastructure managers

ADIF

TP Ferro

Railway undertakings

As of 31 December 2011 the following undertakings held safety certificates:

Acciona Rail Services, S.A.

Activa Rail, S.A.

Alsa Ferrocarril, S.A.U.

Comsa Rail Transport, S.A.

Continental Rail, S.A.

FESUR – Ferrocarriles del Suroeste, S.A.

Ferrovial Railway S.A.

Logitren Ferroviaria, S.A.U.

RENFE Operadora

Société Nationale des Chemins de Fer Français [French SNCF]

Tracción Rail S.A.

Annex A.2 contains the main particulars of these undertakings to which the Safety Directive applies.

In addition to these, at the end of 2011, the following undertakings holding railway undertaking licences did not yet have safety certificates (since they had not expressed interest in obtaining them to begin operation or because their applications were being processed):

Arcelormittal Siderail, S.A.

Eusko Trenbideak – FF.CC. Vascos S.A.

FGC Mobilitat, S.A.

Guinovart Rail, S.A.

Logibérica Rail, S.A.U.

Summary - Overall analysis of trends

In general, and in relation to the various activities currently exercised by the Department of Railways in its role as National Safety Authority, it is worth noting the main conclusions from the activity of 2011:

In relation to **safety certificates and authorisations**:

- Some undertakings appear to have taken a certain stand in the sector for the future liberalisation of passenger rail transport, initiating measures for providing safety certificates.

- The DGF is trying to facilitate the implementation of Regulations 1158/2010 and 1169/2010, for which it is collaborating with railway

undertakings from the initial stages of development of safety management systems.

- In addition, the DGF is aware of the importance of gradually adapting its operation to prepare for the 'Common Safety Methods for Supervision', which will be published soon.

The **accident rate** this year has seen the declining trend continue over recent years, both in the number of accidents and the number of victims.

As for **actions aimed at improving safety**, various actors from the sector are becoming involved, carrying out the actions needed, either on their own initiative or as a consequence of events.

The DGF attaches great importance to the monitoring of the level of compliance with the **recommendations** issued by the Rail Accident Investigation Commission (*Comisión de Investigación de accidentes ferroviarios*), by means of periodic requests for information from the recipients regarding the level of compliance.

Finally, we should like to point out that since 2008, great efforts have been made to implement **Regulation (EC) No 352/2009** through the issue of national regulations. Although there are still some doubts about the interpretation of the Regulation within the sector, there is a gradual improvement in the knowledge and application of it.

C. ORGANISATIONAL ASPECTS

1. Introduction to the Organisation

Within the Government of Spain, the Ministry of Infrastructure and Transport is the department responsible for the rail sector as a whole. Under Rail Sector Act No 39/2003 of 17 November, its main areas of competence are:

- strategic planning of the rail sector, for both infrastructures and the provision of services;
- general organisation and regulation of the rail system, in particular in all matters relating to safety and interoperability and to relations between players in the sector;
- setting targets and supervising the activity of the public railway undertakings, ADIF and RENFE, and their financing arrangements.

Further information about its competences and structure can be found at the following web address: www.fomento.es

Within the Ministry of Infrastructure and Transport, the **Department of Railways** is responsible for exercising powers in relation to railways.

Among its other functions, the Department of Railways is temporarily responsible for carrying out the functions covered by this report. Specifically, under Royal Decree 452/2012[3] of 5 March, developing the basic organic structure of the Ministry of Infrastructure and Transport, it has been allocated the following functions:

> *e) Drawing up draft general provisions relating to railway infrastructures, traffic conditions, rail system safety and interoperability, rolling stock conditions and requirements and to railway staff with regard to safety.*
>
> *f) Exercising the powers falling to the Ministry of Infrastructure and Transport with regard to interoperability and safety of rail traffic in all matters concerning infrastructures, safety systems, rolling stock, their maintenance centres, railway staff relating to safety in rail traffic and training centres and medical examinations of such staff.*
>
> *g) Exercising the powers falling to the Ministry of Infrastructure and Transport in connection with the defence of the public railway domain and the modification of the building boundary line, without prejudice to the powers that correspond to the Railway Infrastructure Manager.*
>
> *h) Representing the Ministry of Infrastructure and Transport at international organisations and the European Union with regard to railway infrastructures,*

[3] During the period between late 2011 and the first quarter of 2012 there was a reorganisation of the Ministry of Infrastructure and Transport. To make things clearer, it was decided to include the existing organisation, despite being outside the time frame of this annual report.

interoperability and safety of rail traffic and participation in the coordination and management bodies of the European rail corridors.

Annex B.1 includes two organisation charts showing the structure of the Department of Railways.

It has some 260 members of staff (including all of the Department's staff whose functions are unrelated to the National Safety Authority).

Furthermore, for activities related to the functions of the National Safety Authority, an additional 50 members of staff from other undertakings and organisations provide support to the Department of Railways.

2. Relationship of the National Safety Authority with other national bodies

In 2011, in addition to the Department of Railways, the main players in the rail system were:

- **Department of Land Transport**

  This department reports on railway matters to the Ministry of Infrastructure and Transport, via the State Secretariat for Transport, and is responsible for issuing licences to railway undertakings.

- **Rail Regulation Committee**

  This is the rail sector regulator. It is a collegiate body reporting to the Under-Secretariat of the Ministry of Infrastructure and Transport. It is composed of officials from the Ministry of Infrastructure and Transport and its principal missions are:

  - To safeguard plurality in the provision of rail services.
  - To ensure equal conditions of access to the market for all operators.
  - To resolve disputes between ADIF and the railway undertakings.

  Further information about its competences and structure can be found at the following web address:

  http://www.fomento.gob.es/MFOM/LANG_CASTELLANO/ORGANOS_COLEGIADOS/CRF/

- **Rail Accident Investigation Commission**

The Rail Accident Investigation Commission (CIAF) was established in 2007, attached to the Ministry of Infrastructure and Transport[4], but independent of the National Safety Authority, of ADIF and of the operators, as set out in Royal Decree 810/2007, and complies fully with the provisions of Directive 2004/49.

For more information about this organisation, please consult the following link:

http://www.fomento.gob.es/MFOM/LANG_CASTELLANO/ORGANOS_COLEGIADOS/CIAF/

- **ADIF**

The railway infrastructure manager, ADIF, was established by the Rail Sector Act, Law 39/2003 of 17 December. The articles of association of ADIF were laid down in Royal Decree 2395/2004 of 30 December 2004. It began operation on 1 January 2005. ADIF is a public enterprise, with managerial autonomy within the limits laid down by its governing regulations and is part of the Ministry of Infrastructure and Transport. It has its own legal personality, full capacity to work for the achievement of its ends, and its own assets. Its principal purpose is to manage and construct railway infrastructures.

ADIF runs the General Interest Rail Network (RFIG), with the exception of the FEVE network and the stretch belonging to the 'International Section' run by the infrastructure manager, TP Ferro. As well as managing the aforementioned railway infrastructures (operation and maintenance), it is responsible for the construction of any lines commissioned by the State, funded either from its own resources, for lines it owns, or out of the State budget, where State-owned.

Further information about its competences and structure can be found at the following web address: www.adif.es

- **TP Ferro**

The undertaking TP Ferro is the concessionaire of the new high speed line between Spain and France for a period of 53 years. This concession, approved by the Kingdom of Spain and the French Republic in 2003 and endorsed via the concession contract of 17 February 2004 (BOE [Official

[4] As laid down by Royal Decree 452/2012 of 5 March, establishing the basic organisational structure of the Ministry of Infrastructure and Transport, this body was attached to the Ministry of Infrastructure and Transport, via the Secretariat.

State Gazette] 175 of 21/7/2004), authorises TP Ferro to act as Railway Infrastructure Manager of the 'International Section' covered by the concession, in accordance with Directive 2001/14/EC and with the provisions of the applicable legal rules and specifications in the territory of both concession-granting states. It began operation on 19 December 2010.

Further information about its competences and structure can be found at the following web address: www.tpferro.com

- **RENFE-Operadora**

The present undertaking RENFE-Operadora was established by the Rail Sector Act, Law 39/2003 of 17 November, as a public enterprise. The articles of association of RENFE were laid down in Royal Decree 2396/2004 of 30 December 2004. It began operation on 1 January 2005.

RENFE-Operadora was created by splitting off business units providing rail services and other commercial activities from the former railway undertaking.

RENFE-Operadora is a public enterprise, with managerial autonomy within the limits laid down by its governing regulations and is attached to the Ministry of Infrastructure and Transport. It has its own legal personality, full capacity to work for the achievement of its ends, and its own assets. Its purpose is to provide passenger and freight rail services and other services or complementary activities or those linked to rail transport.

Further information about its competences and structure can be found at the following web address: www.renfe.es

- **Other Operators**

As a result of liberalisation of the goods transport sector new operators are gradually joining the rail sector. Between 2006 and 2010, in addition to RENFE-Operadora, six undertakings obtained the requisite safety certificate. Four new safety certificates were issued to other railway undertakings in 2011.

It should be noted that in May 2011, the activity of the railway undertaking English Welsh & Scottish Railway International Limited (EWSI) branch in Spain, was taken over by Activa Rail, S.A.

Annex B.2 contains an organisational chart setting out the relationships between the main actors in the system.

D. EVOLUTION OF RAILWAY SAFETY

Initiatives for Maintaining/Improving Safety

General Safety Improvement Policies

The basic aims of state planning in infrastructure and transport in Spain expressly include improving the already high levels of safety in rail transport, paying particular attention to eliminating and improving the safety of level crossings.

Thus, the main **safety measures of the Ministry of Infrastructure and Transport** in 2011 have been a continuation of the medium-term activities initiated in previous years:

- **2005-2012 Level Crossings Safety Plan**, with a planned investment of EUR 1 080 million aimed at:
  - Eliminating more than 50% of the 3 764 public crossings in operation (including in the FEVE network, which is not covered by this report)
  - Improving the protection system of the remaining crossings
- **Adif Strategic Plan**, which has a safety objective of reducing the rate of train accidents attributable to the infrastructure.

  In order to achieve this target, the **Programme of Measures to Improve the Safety and Functionality of the Network** is being implemented by means of investments in the network.
- **RENFE-Operadora Strategic Safety Plan.**
- Introduction of the **ASFA Digital System**.

Other Measures to Improve Safety

In addition to implementing the broad strategies referred to in the previous section, other specific measures were taken during 2011, focused on solving specific problems arising from accident rates and the investigation of events which have occurred.

1.2.1. Measures Taken by the Railway Infrastructure Manager ADIF

- **ANNUAL SAFETY PLAN 2011.** The plan aims to achieve a continuous improvement in safety levels on the General Interest Railway Network and forms the most important tool in ADIF's safety management system.

The Annual Safety Plan's main objectives for 2011 were:

- Preventing accidents and incidents.
- To carry out the measures of the ADIF Strategic Plan each year in chronological order.
- To have all departments of the undertaking commit to a gradual reduction in the rate of accidents and incidents.
- To detect and correct infringements of the regulations, incorrect procedures, unsafe practices and possible shortcomings in the state of the facilities.
- To establish an annual accident rate index for quantifying the target indicator laid down in the Strategic Plan, assisting the continuous improvement in safety levels on the RFIG administered by ADIF.

The level of fulfilment of the measures provided for in the 2011 Annual Safety Plan was practically 100%, reducing the accident rate below the target indicators set, with the exception, already mentioned, of the accidents to persons attributed to ADIF.

- **SUMMARY OF RECOMMENDATIONS IMPLEMENTED FOR THE PURPOSE OF IMPROVING RAILWAY SAFETY AND REDUCING ACCIDENT RATES.**

1. Those aimed at reducing the **risk of people being run over:**

<u>In Stations:</u>

- Continuing to promote the elimination of crossings between platforms over the line and, where this is not possible, by replacing their paving with non-slip rubber.
- Improving the resource aspect of stations with regard to information reminding people of the need to use the proper paths for crossing lines.
- Launching information campaigns on the precautions to be observed by pedestrians in the vicinity of railway lines, especially in stations.
- Increasing perimeter fences in the vicinity of stations to prevent access to these across the lines, especially near car parks and housing developments.

<u>Level Crossings:</u>

- Continuing with the plan to eliminate level crossings.

On Open Line:

- Increasing railway line perimeter fences on the conventional network.

- Stressing the inspection of existing perimeter fences and prompt repair of those damaged.

2. Aimed at reducing the **risk of derailments:**

   On branch lines of stations and freight terminals: meeting the economic requirements for the maintenance and, where necessary, renewal of branch lines that are used for moving trains out of the way and shunting in cases where there are no alternative routes or the use of these significantly complicates the operation.

   Due to the state of the rolling stock: continuing with measures for adding to the checks and inspections set in motion before the rise of such accidents in 2009, especially in the incidents that occurred in gauge changing systems.

3. Aimed at reducing the **risk of accidents at level crossings:** as noted when discussing the risk of people being run over, also applicable to running into vehicles, by continuing to boost the plan for eliminating level crossings.

4. Aimed at reducing **running into obstacles:**

   Due to natural causes:

   - Increasing the number of detectors of objects on the line in high-risk areas, such as trenches, overpasses and tunnel mouths.

   - Carrying out planned works on reinforcing tunnels and trenches to prevent landslides.

   Due to acts of vandalism: as in the case of people being run over, the perimeter fencing of lines is useful in reducing such incidents.

5. Aimed at reducing **signal failure incidents:** although occurring infrequently, given the severity of accidents that may result, it is appropriate to examine the situations that could cause such events and, in particular, meet stringent action protocols in carrying out modification work on safety facilities.

6. Other measures aimed at **improving other safety aspects** of railway operation:

   Addressing the funding of the Fund for the Urgent Correction of Anomalies detected in inspections and for implementing proposals for urgent improvement of the infrastructure.

   Introduction of the Plan to Install Warning Beacons for Exit Signals from stations, to minimise overrunning this type of signal.

   Increasing the number of heat detectors for reducing events related to wheel or axle breakages.

   Stepping up projects and work on refurbishing and improving lines, even those with less traffic.

   Carrying out work on modernising interlocks and, in general, for improving safety facilities.

7. Plans for **continuous staff training related to traffic safety,** such as those related to special training in inspecting track, cargo and rolling stock and rail accident investigation, all incorporating the latest developments in each field.

1.2.2. Measures Taken by the Railway Infrastructure Manager TP Ferro

The Internal Safety Committee of TP Ferro, responsible for dealing with TP Ferro's internal safety problems as well as those that may involve adjacent infrastructure managers and/or railway undertakings, validated the 2011 Safety Action Programme for achieving the objectives outlined below:

- Finalising the safety documentation (75%).

  25% remaining to be completed in 2012 for final implementation.
- Putting the supervision plans into practice (100%).
- Deriving experience feedback (100%).
- Performing regular maintenance inspections (100%).
- Increasing the reliability of safety documentation (100%).
- Limiting the number of safety or operating malfunctions (99.44%).
- Obtaining a favourable outcome for the external audit on the safety management system.
- Monitoring professional training (90%).

  The outstanding 10% corresponds to the retention of individual files.

1.2.3. Measures Taken by the Railway Undertakings

Generally speaking, the railway undertakings in Spain approach safety through:

- Having the undertaking's management bodies approve their safety policy.
- A strategic traffic safety plan, aimed at continuously reducing risk levels.
- An annual traffic safety plan, which basically determines the annual operational inspection targets, i.e. the frequency and number of inspections to be carried out:
  - Safety inspections, safety checks and safety monitoring.
  - Checks on consumption of alcohol and psychoactive substances or drug abuse.
  - Inspections and audits of vehicles.
- Establishing a series of guidelines regarding Safety based on:
  - The results of internal and external audits and reviews of experience.
  - Progress in organisations and tools.
  - Consolidation of measures implemented in 2010.
  - Cross-reference guidelines of the undertaking.
  - Establishing a policy of accompanying commercial trains for the training and continuous improvement of their drivers.

More specifically, the main operator in Spain, Renfe-Operadora, took the following measures over the reporting year:

1.2.3.1. Renfe-Operadora

- **OBJECTIVES SET BY THE RENFE-STATE CONTRACTS PROGRAMME.** The Safety Management System implemented by Renfe Operadora has a set of indicators for monitoring overall progress in safety, and assessing the degree of achievement of the Safety Objectives set and laid down in the subsequent Renfe-State Contract-Programme. These objectives have been met in every financial year.

- **STRATEGIC SAFETY GUIDELINES.** These strategic guidelines are planned annually, being of a sliding nature, and containing a set of actions aimed at the continuous reduction of risk levels, based on issues such as modernising safety facilities, improving rolling stock equipment, updating training plans and revising and improving the management systems themselves. These strategic safety guidelines are reviewed again every year.

  For achieving the Objectives set for 2011, the Strategic Guidelines (*LE*) were implemented as follows:

  - *LE No 1:* Continuous Improvement of the Safety Management System.
  - *LE No 2:* Continuation with Cultural Change.
  - *LE No 3:* Human Factor Risk Management.
  - *LE No 4:* Technical Factor Risk Management.
  - *LE No 5:* Innovation and Systems Development.

  Each strategic guideline, through the Annual Safety Plan, laid down a set of Operational Objectives for reducing accidents and incidents caused by human and technical error, by implementing management measures and the development of new technologies for eliminating or reducing the risk of accidents, especially in the field of rail vehicle driving.

  The following are the Operational Objectives set with the main actions noted for each of them:

  1. Developing the Safety Management System.
     - New functionalities of the HABILITA application, including the introduction of smart cards containing Qualifying Certificates and their status, and online access to them both through the INTERESA portal and via readers on Blackberry devices.
     - Definition of the technical specifications for the procurement of the new application AGRYPA for computerised management of risks, dangers and threats, both technical and human.
  2. Reduction of Risks due to Human Error.
     - Development of the necessary elements for the management of risks due to the human factor for their integration into the technical specifications of the new application AGRYPA.

- Analysis of the introduction of surveys on the use of mobile phones in driving cabs, in the preliminary phase for ensuring compliance with the Organic Law on Data Protection.

3. Reduction of Risks due to Technical Failure.
   - Development of the necessary elements for the management of risks due to technical failure of equipment for their integration into the technical specifications of the new application AGRYPA.
   - Promotion of preventive inspection against equipment failure.

4. Improving Safety through Training.
   - Preliminary analysis for the introduction of an 'Experience Feedback' Procedure for Operating Hazards in training.
   - Implementation of Circular Resolution No 2.

measures relating to accidents, incidents and safety recommendations

This section will conduct a review of the main actions considered by the various actors in the rail sector, as a direct consequence of accidents, incidents or specific events.

For the most part, the actions in the following table are derived from **safety recommendations** (see section D(3) of this report)[5] .

	EVENT: Wheel breakage generated from a notch caused by a defective lathe.
Actions:	▪ Improvement of the inspection procedures of all types of wheels that may have been machined on lathes that produced the problem. ▪ Establishment of a specific action plan for the affected vehicles and monitoring it. ▪ Modification of the system for securing the wheels on the lathes, to ensure that there are no blemishes.
	EVENT: Lateral collision caused by deformations in the track on ballast, in a tunnel with very strict geometric conditions.

[5] This includes the measures of those recommendations considered closed during 2011, due to the DGF considering that the degree of compliance was satisfactory.

Actions:	▪ Preventive maintenance plans with geometric monitoring of the track in areas with similar characteristics. ▪ In the medium term, a circular resolution was issued with design recommendations for the track superstructure in tunnels.
	EVENT: Accident due to being run over on the way between platforms at stations and halts.
Actions:	▪ Implementation of an inventory of existing stations and halts on the Spanish network, which includes various parameters in order to perform a risk analysis providing an idea of their dangerousness. A plan of measures to be adopted will be drawn up on the basis of the results, prioritising the stations and halts where action must be taken and the different action to be taken according to their level of risk. ▪ Development of the Plan to improve safety at level crossings at stations and halts, adapting the crossings and their superstructure.
	EVENT: Derailment on gauge changing system.
Actions:	▪ Updating the procedure for passing through the gauge changers and the operator instructions. ▪ Technical improvements in the devices, both fixed and on the train.
	EVENT: Accident due to being run over during work on the line.
Actions:	▪ Training activities aimed at employees of the undertakings involved in carrying out work on the line.

	EVENT: Collision due to technical failure of the safety facilities caused by interlock changing operations.
Actions:	▪ Review of the safety processes and quality of the installation company, improving the monitoring of the activities of verification/validation of the systems before commissioning and their documentary evidence. Review of the procedure for conducting simultaneous work on safety facilities with traffic, ensuring: That traffic is halted or, failing that, an alternative locking system is set up. On-site checking before allowing traffic. Incorporation of prioritising responsibilities into common action protocols.
	EVENT: Derailment due to wheel misalignment.
Actions:	▪ Auditing the maintenance centre responsible for operations on the affected vehicle.
	EVENT: Group of people being run over due to unauthorised mass invasion of the line for crossing improperly between platforms at a halt (Accident at the Castelldefels halt)
Actions:	▪ The findings of the investigation concluded that the accident was due solely to the recklessness of a group of passengers who, on alighting from the train, improperly invaded the line to cross to the other side of the station. Nevertheless, a study was carried out for analysing the feasibility of installing physical measures at stations and halts, separating the two lines to prevent pedestrians crossing. An analysis was made of the experience of other countries and the possible advantages and problems that a fence located between lines might involve.

	EVENT: Injury to passengers, due to starting the train before the passengers had finished getting on/off.
Actions:	▪ Conducting communication workshops for on-board train crew on compliance with regulations, and subsequent inspection campaigns.
	EVENT: Derailment due to fracture of the wheel bearing.
Actions:	▪ Gradual replacement of this type of bearing with another of a new design.
	EVENT: Running into a lorry on a temporary works level crossing.
Actions:	▪ Change in the procedure for authorising temporary level crossings for works on the line, to incorporate a preliminary risk analysis, which will determine the necessary safety measures. ▪ Introduction of additional inspection measures for those responsible for the safety of works crossings.
	EVENT: Near collision due to improper passing of a signal.
Actions:	▪ Remodelling of interlocking and signalling to solve the problem of visibility of signals in the area. ▪ Implementation of measures for human error management.
	EVENT: Derailment due to poor state of the infrastructure.
Actions:	▪ Programmes for intensifying inspections and monitoring the correct state of rail sleeper fastenings. ▪ Preventive maintenance plans.

EVENT: Derailment due to loss of axle-box.	
Actions:	▪ Improving the technical standards for maintenance of these components and conducting audits. ▪ A study has been undertaken to explore the possibility of introducing automatic systems into hot axle detection equipment for monitoring risk-inducing temperature variations, establishing correlated and computerised chains in real time for tracking between successive detectors on the same line. A study is also being made of whether it is appropriate to make changes to the existing regulations on the management of alarms that occur in hot axle detector equipment.
EVENT: Axle breakage resulting from a crack likely to be caused by arcing due to malfunctioning of the earthing system.	
Actions:	▪ Incorporation into the maintenance plan of a new procedure for inspecting earthing systems and the axle contact area. ▪ Analysis of the entire vehicle fleet, for tracing other similar failures that might occur.
EVENT: Passing a signal as a result of inadequate braking.	
Actions:	▪ Strengthening procedures related to the monitoring of maintenance operations to ensure their correct use on vehicles before putting them into circulation. ▪ Defining the content of training for railway vehicle driving permits including a special section on 'Driving under degraded conditions.' ▪ Inspection of Maintenance Centres
EVENT: Collision due to non-compliance with the General Traffic Rules (RGC)	
Actions:	▪ Training courses from the point of view of Traffic Safety, and Prevention of Occupational Risks.

Furthermore, measures have also been carried out in relation to types of **incidents** which have increased from last year:

- The increase in shifting of loads continues to be tracked, as well as compliance with the proposed corrective measures, in particular the proper closure of the containers' side tarpaulins during the loading process and their correct condition, focusing efforts on the freight operators that show a larger proportion of such incidents.
- Regarding outbreaks of fire/explosion, inspections have been tightened on wagon brakes, one of the most likely factors for causing fires in rolling stock, and freight operators have been ordered to step up their rigour over the following aspects:
  - Checking the continuity of the braking circuits, the tightening and loosening of components and of any device whose malfunction could result in the brake seizing up.
  - Checking the state of the brake shoes and their alignment, as well as the spark arrester, in order to prevent them from acting as initiators of fire.
- With regard to signalling failures, although their number has been reduced, there is continued monitoring of activities that may lead to such events, particularly the completion of modification work on safety facilities, checking all the processes interacting on the changes and modifications to them.

Trend Analysis with Detailed Data

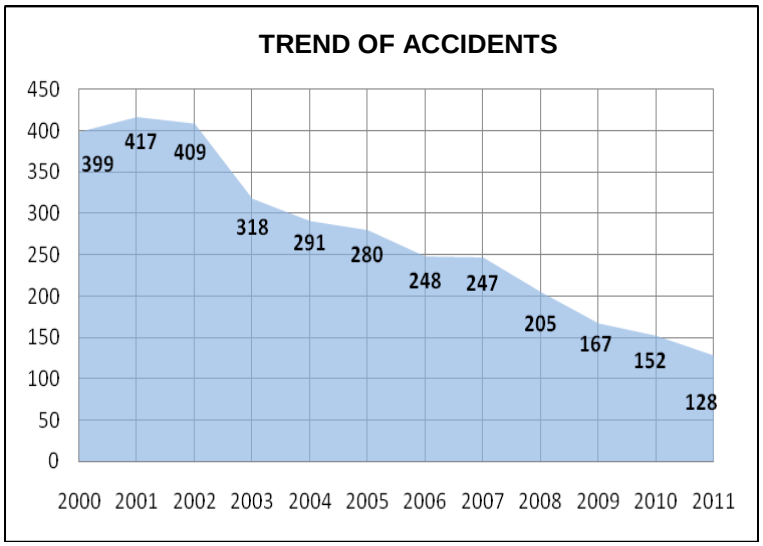
This report sets out the statistics for significant accidents occurring on the General Interest Rail Network run by the Railway Infrastructure Manager ADIF during 2011, given that since TP Ferro began operating (at the end of December 2010) there have been no incidents or accidents on its network.

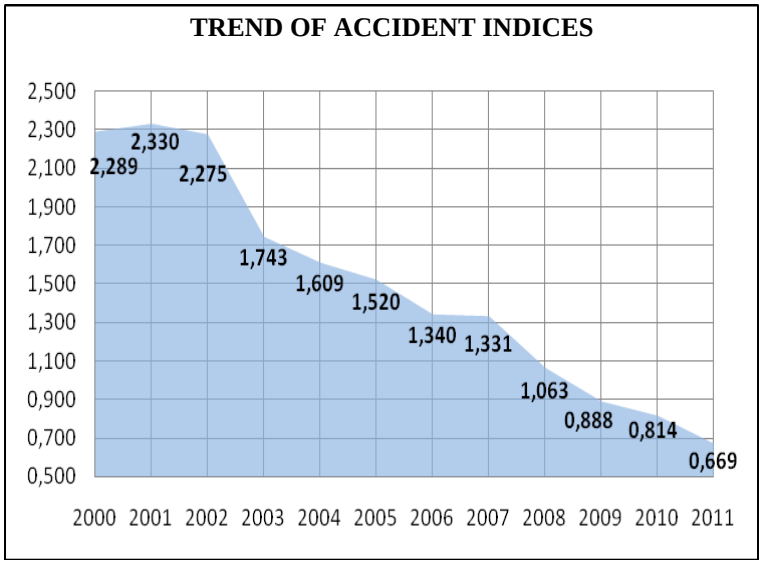
A series of graphs have been prepared showing the trend for each of the Common Safety Indicators, according to the criteria and formats supplied by the European Railway Agency.

Annex C gives a breakdown of these statistics.

A highly significant feature of the accident rate in Spain is that a high proportion of accidents are not caused solely by railway operation; they are due to the involvement of third parties (level-crossing users or third parties improperly accessing railway facilities).

In 2011, 128 accidents occurred compared with 152 in the previous year, which means a reduction of 15.8%. The accident rate (number of accidents per million train-kilometres travelled) was 0.669, less than the figure for the previous year of 0.814, representing a fall of 17.8%.

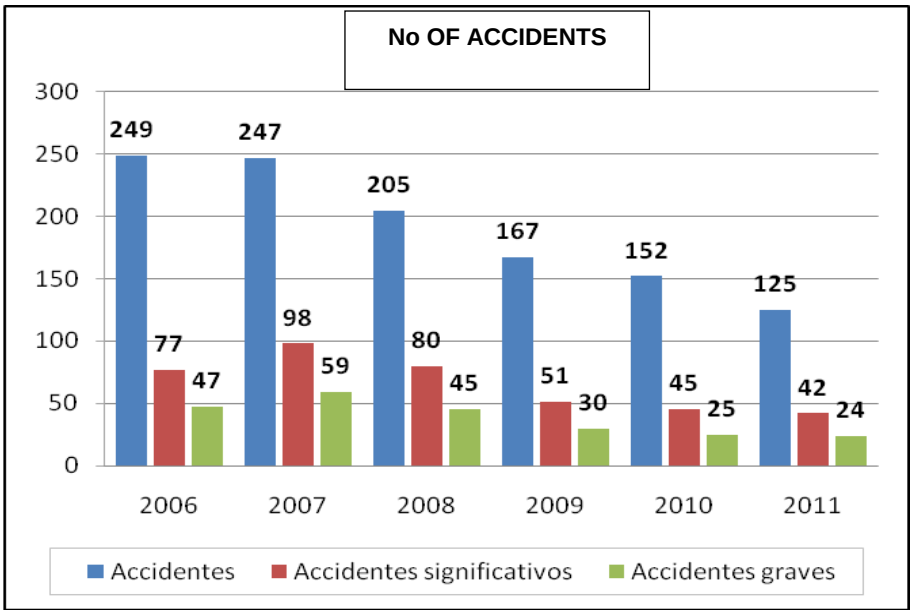




The series of graphs shown below illustrates the trend of the accident rate in recent years on the General Interest Rail Network (RFIG) managed by the Railway Infrastructure Manager, ADIF.

The first graph shows a **downward trend in the total number of accidents in recent years**, the total number having fallen by 124 between 2006 and 2011.

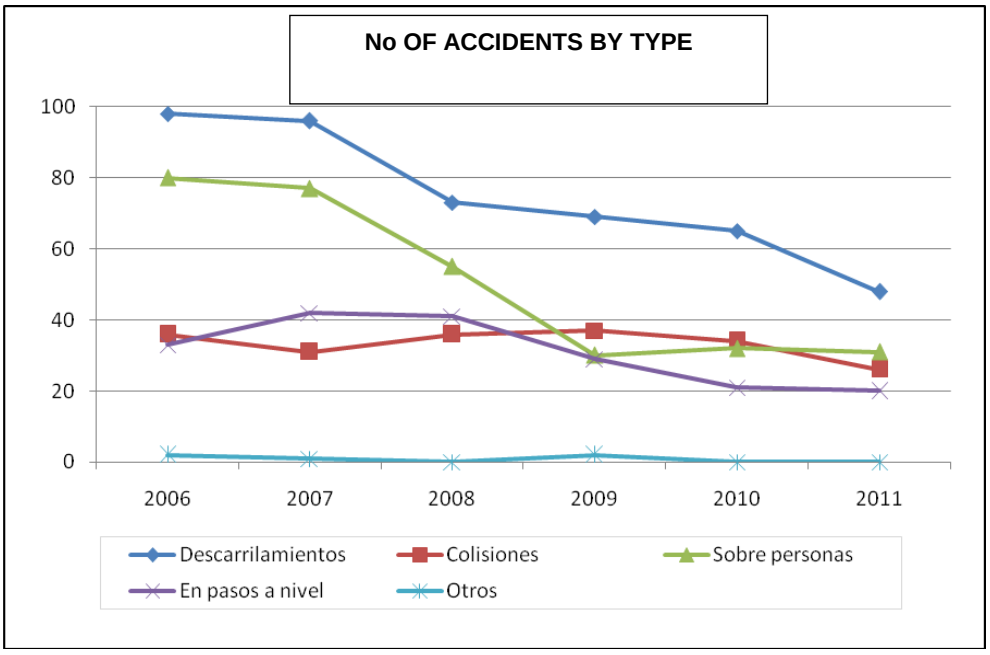
The total **significant and serious accidents that occurred** in 2007 has levelled out from then, and is clearly falling in successive years for both types of accidents (reaching minimum values in 2011):



Accidents Significant accidents Serious accidents

By type of accident, a decrease in all categories of accidents is observed compared with the previous year.

Accidents	2006	2007	2008	2009	2010	2011
Derailments	98	96	73	69	65	48
Collisions	36	31	36	37	34	26
To persons	80	77	55	30	32	31
At level crossings	33	42	41	29	21	20
Other	2	1	0	2	0	0
TOTAL	249	247	205	167	152	125

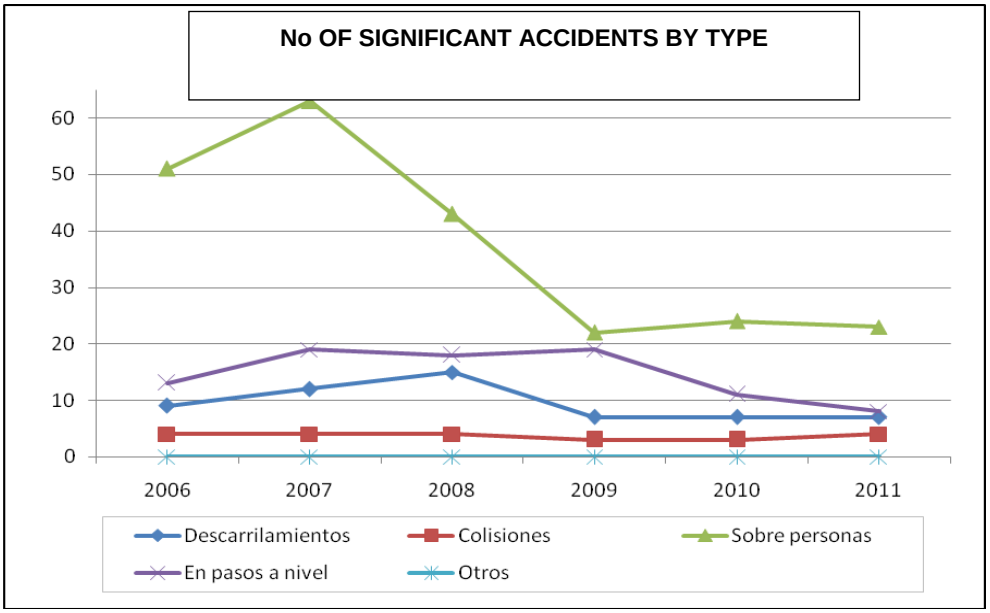


Derailments Collisions To persons
At level crossings Other

The third graph shows the analysis of trends in **significant accidents broken down by type**. By way of a general conclusion, no steady trend can be observed for any type of accident.

It should be noted that the number of accidents at level crossings fell considerably in 2010, reaching its lowest value in 2011. However, the value for accidents to persons varies slightly. On the other hand, derailments have remained steady over the last year.

Significant accidents	2006	2007	2008	2009	2010	2011
Derailments	9	12	15	7	7	7
Collisions	4	4	4	3	3	4
To persons	51	63	43	22	24	23
At level crossings	13	19	18	19	11	8
Other	0	0	0	0	0	0
TOTAL	77	98	80	51	45	42

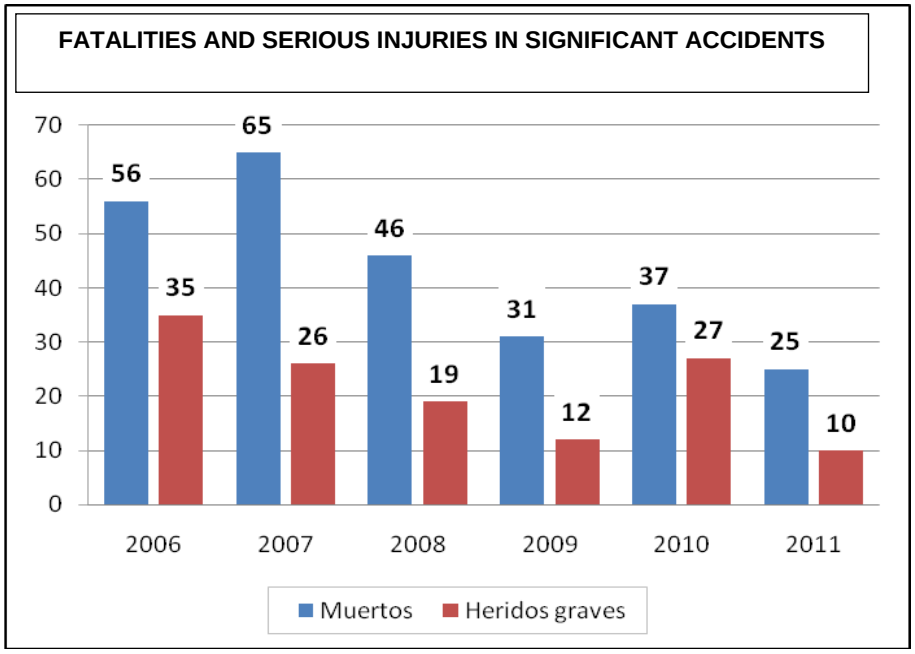


Derailments
At level crossings
Collisions
Other
To persons

The graph below shows the number of **fatalities** between 2006 and 2011, in a downward trend over the period 2006–2009, increasing again in 2010. The same thing occurs with **serious injuries**, also increasing in 2010.

As explained in the Annual Safety report of the National Safety Authority, with data related to 2010, this increase (in the number of casualties and serious injuries) is distorted by the occurrence of a single serious accident at the station of **Platja de Castelldefels**, in which there was a total of 12 fatalities and 10 serious injuries.

In 2011 a decrease is again observed in the number of both serious injuries and fatalities.

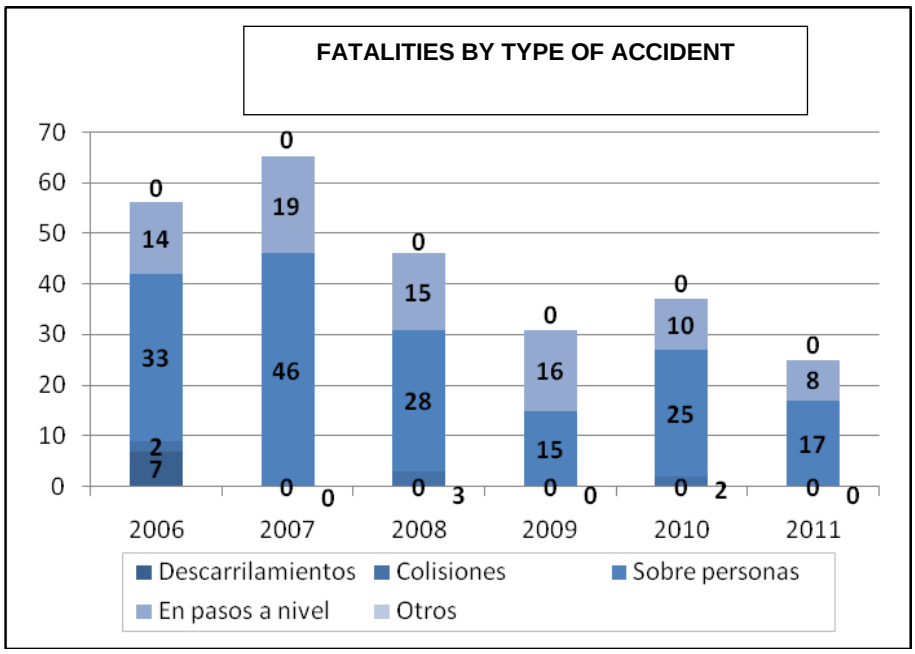


Fatalities Serious injuries

Below is a breakdown of the number of **fatalities by different types of accident**.

In 2011 the number of fatalities in accidents to persons decreased from 25 in 2010 to 17 deaths in 2011.

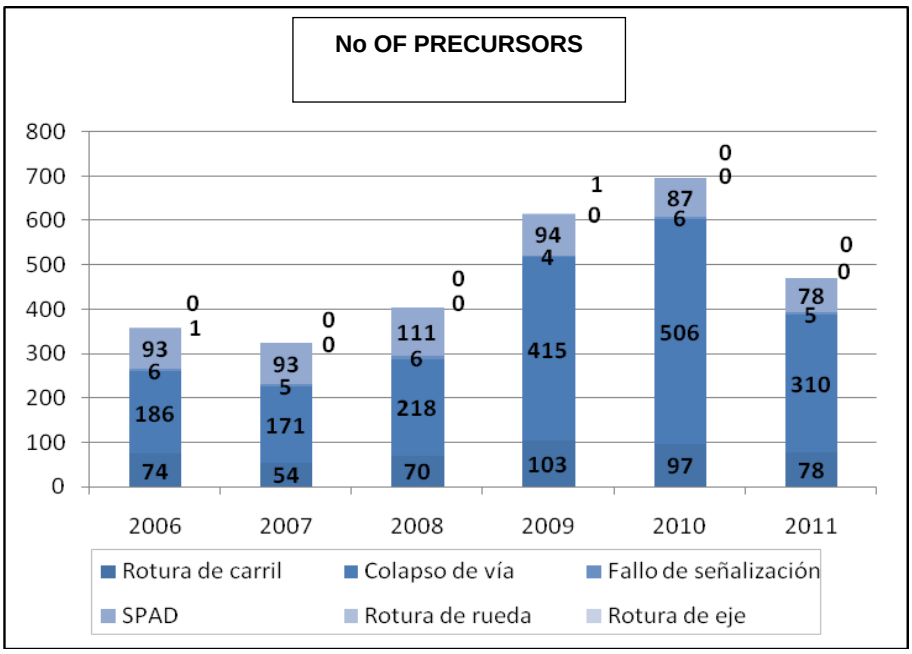
Moreover, the number of accident victims at level crossings fell.



Derailments Collisions To persons
At level crossings Other

Finally, a graph is shown comparing the various **accident precursors** observed in recent years. It can be seen in this graph that there is no clear trend in the different types of precursor. Despite this, in 2011 there was a decrease in the amount of all types of precursors summarised here.

It should be pointed out that there were hardly any broken axles and/or wheels, only two such incidents occurring over the period 2006–2011.



Broken rail	Line collapse	Signalling failure
SPAD	Broken wheel	Broken axle

The following conclusions can be drawn from the analysis of railway accident data for 2011:

- A fall in the accident rate is observed on the General Interest Rail Network managed by the Railway Infrastructure Manager ADIF compared with previous years (-16% compared with 2010, 128 accidents as against 152), confirming the downward trend of the last few years.
- The number of casualties has continued the downward trend of recent years, which had been distorted in the previous year following the unique accident which led to the multiple casualties that occurred at the Platja de Castelldefels halt in June 2010.
- In 2011 there were no casualties due to train derailments or collisions.

1. RESULTS OF SAFETY RECOMMENDATIONS

The investigation of accidents and incidents occurring on the network is a fundamental tool in detecting and preventing risk situations. This investigation must be extended to accidents and accident precursors which, although without serious, personal or financial repercussions, display particular characteristics such as recurring in time or in a geographical area or the fact that their causes may be attributable to railway management.

Accordingly, for every accident investigated a report is drawn up ascertaining the causes and making specific recommendations with a view to improving railway facilities, seeking possible guidelines for the conduct of the persons involved and, in short, preventing it from recurring.

In 2011 the Rail Accident Investigation Commission opened a total of 63 cases over the entire national network, of which a total of 19 accidents and 5 incidents were finally investigated, broken down into 14 derailments, 1 accident to persons, 1 level crossing accident, 3 collisions, 3 signal overruns (all of them resulting in near collisions), 1 signalling failure and 1 case of runaway rolling stock (specifically, 8 carriages).

Of the aforementioned total, in 2011, a total of 18 accidents and 4 incidents were investigated within the General Interest Rail Network run by the Railway Infrastructure Manager (ADIF), to which this report relates, according to the definition given in the Safety Directive (2004/49/EC). Of those, 13 were classified as derailments, 1 as an accident to persons, 1 as a level crossing accident, 3 as collisions, 3 as passing a signal and 1 as a signalling failure.

A summary is given below of the **more important safety recommendations** put forward in 2011 by the CIAF [Rail Accident Investigation Commission] to the NSA from the previously mentioned events whose investigation had been completed:

To: Department of Railways

- To modify the protection conditions of certain level crossings.
- To establish clear, logical, action guidelines for traffic and driving staff, in cases of passing signals with an order to check switches and crossings, reinforcing the content of driver training for recognising the status of these devices.
- To draw up a standard for track delivery conditions after work is completed on it, whether it occurs in normal or degraded conditions.

To: Railway undertakings

- Mechanical modifications to the gauge changing mechanisms on variable gauge trains.
- Monitoring the performance of the onboard equipment of certain units.

- Improvements in vehicle maintenance plans (e.g. for inspecting earthing systems and axle contact area, or for including ultrasonic testing).
- To implement the necessary measures for ensuring that communications with the cab driving staff are properly regulated, in order to avoid possible distractions, especially when travelling in degraded conditions.

To: Infrastructure managers

- Monitoring the performance of certain specific beacons suspected of malfunctions.
- Specific improvements in the infrastructure, for example:
  - Improved visibility of a given signal or changes in the operating programme of a particular area.
  - Replacing the sleepers of a section of line.
  - Incorporation of a particular station in an interlocking system.
- Monitoring work activities that may affect train traffic, in occupational health and safety programmes, intensifying inspections and the training of works managers.
- Intensifying the training of those in charge of traffic on lines equipped with a third rail.
- Training and refresher courses.

The Department of Railways tracks the degree of compliance with these recommendations by the parties involved.

To do so, it makes periodic requests for information to the agency to which the recommendation was addressed, requesting data on its degree of compliance. When it is considered that it has reached a sufficient level of implementation of the recommendation, it is reported to the Rail Accident Investigation Commission for closure (see chart below).

Translation

Recomendaciones de seguridad	Safety recommendations
CIAF	Rail Accident Investigation Commission
(Emite informe final con recomendaciones)	(Issues final report with recommendations)
Remisión informe final	Submission of final report
Remisión de la información solicitada a la DGF	Submission of information requested to the Department of Railways [DGF]
Remisión de nueva información sobre las medidas adoptadas	Submission of new information on the measures adopted
INFORMAR PERIÓDICAMENTE	REPORT PERIODICALLY
PARTES IMPLICADAS	PARTIES INVOLVED
NSA (DGF)	National Safety Authority (Department of Railways)
(Responsable de la implementación de la recomendación)	(Responsible for implementing the recommendation)
Remisión informe final Petición de medidas adoptadas	Submission of final report Request for measures adopted
ORGANIZACIÓN A LA QUE SE DIRIGE LA RECOMENDACIÓN (IM/RU/etc.)	ORGANISATION TO WHICH THE RECOMMENDATION IS ADDRESSED (IM/RU/etc.)
MEDIDAS A ADOPTAR EN UN FUTURO	FUTURE MEASURES TO BE ADOPTED
MEDIDAS ADOPTADAS	MEASURES ADOPTED
CASO CERRADO	CASE CLOSED
Informe periódico de DGF a:	Department of Railways periodic report to:
ERA CIAF	ERA [European Railway Agency] CIAF [Rail Accident Investigation Commission]

Section D(1.3) sets out the most significant actions taken (completed or in progress) in compliance with these recommendations. This is not an exhaustive list, and only shows the most significant since, in principle, work is being done to achieve compliance with all the recommendations of the CIAF.

E. MAIN CHANGES IN LEGISLATION, REGULATIONS AND ADMINISTRATIVE PROVISIONS

The legislative development at national level continued during 2011, building on the legal basis laid down in previous years via the publication of the following legislation:

- **CIRCULAR RESOLUTION 1/2011 ON THE VALIDATION PROCEDURE FOR MODIFIED RAILWAY VEHICLES, PURSUANT TO ORDER FOM/233/2006 OF 31 JANUARY, ON ROLLING STOCK.**

  Revision of Circular Resolution 10/2008 for modified vehicles, adapted to Regulation (EC) No 352/2009 on the Common Safety Methods for Risk Assessment

- **ROYAL DECREE 641/2011 OF 9 MAY, AMENDING THE REGULATION ON TRAFFIC SAFETY OF THE GENERAL INTEREST RAIL NETWORK, APPROVED BY ROYAL DECREE 810/2007 OF 22 JUNE.**

  Transposition into Spanish law of Directive 2008/110/EC of the European Parliament and of the Council of 16 December 2008 amending Directive 2004/49/EC on safety on the Community's railways.

- **RESOLUTION OF 6 JUNE 2011 OF THE DGIF, AMENDING THAT OF 15 OCTOBER 2007, LAYING DOWN BASIC TRAINING ITINERARIES AND THE MINIMUM STUDY WORKLOAD OF TRAINING PROGRAMMES FOR RAIL STAFF QUALIFICATIONS TO BE GIVEN AT APPROVED RAILWAY STAFF TRAINING CENTRES. (BOE [OFFICIAL STATE GAZETTE] OF 4 JULY 2011)**

  Update of the Training Itinerary Resolution to incorporate new rolling stock.

- **ORDER FOM/3218/2011 OF 7 NOVEMBER AMENDING ANNEXES II, V AND VI TO ROYAL DECREE 1434/2010 OF 5 NOVEMBER ON THE INTEROPERABILITY OF THE GENERAL INTEREST RAIL NETWORK SYSTEM.**

  Transposition into Spanish law of Directive 2011/18/EU of the Commission of 1 March 2011 amending Annexes II, V and VI to Directive 2008/57/EC of the European Parliament and of the Council on the interoperability of the rail system within the Community.

Details of the above legislation can be found in **Annex D** to this document.

F. EVOLUTION OF SAFETY CERTIFICATION AND AUTHORISATION

1. SPANISH PROVISIONS ON THE ISSUANCE OF SAFETY CERTIFICATES AND AUTHORISATIONS PURSUANT TO DIRECTIVE 2004/49/EC

The national legislation on the issue of safety certificates and authorisations is Royal Decree 810/2007, transposing the Safety Directive 2004/49/EC, whose Title II states:

> *Title II, on safety authorisation and safety certificates, lays down the requirements and conditions for the granting, maintenance, suspension and revocation of those documents.*

Based on this regulation, **14 Safety Certificates were issued in 2011** (counting parts A and B separately) to the following railway undertakings (more information in Section F(3) of this report):

- Activa Rail;
- Alsa Ferrocarriles;
- Comsa Rail Transport;
- Continental Rail.
- FESUR - Ferrocarriles del Suroeste [South-western Railways];
- Ferrovial Railway;
- Logitren Ferroviaria
- Renfe-Operadora

The assessment process prior to the issue of safety certificates for the aforementioned railway undertakings was based on (EU) Regulation No 1158/2010 of the Commission of 9 December 2010 on a common safety method for assessing conformity with the requirements for obtaining railway safety certificates.

However, there have been no applications by rail infrastructure managers for **SAFETY AUTHORISATIONS** throughout 2011. Accordingly, in the year covered by this report the Department of Railways has not granted any safety authorisations.

2. AVAILABILITY OF SPANISH SAFETY RULES AND ALL OTHER RELEVANT NATIONAL LEGISLATION FOR RAILWAY UNDERTAKINGS AND INFRASTRUCTURE MANAGERS

Information about Spanish safety rules and all other related national legislation can be found on the website of the Ministry of Infrastructure and Transport:

http://www.fomento.es/MFOM/LANG_CASTELLANO/DIRECCIONES_GENERALES/FERROCARRILES/_INFORMACION/NORMATIVA/

This information can also be found in ADIF's Network Statement, which is available at the following web address:

http://www.adif.es/es_ES/conoceradif/declaracion_de_la_red.shtml

The full texts of the Spanish safety regulations and laws can also be obtained on the website of the Official State Gazette (BOE), as they are published there before their entry into force:

http://www.boe.es/diario_boe/

3. PROCEDURAL ASPECTS

Comments taken from applying the procedure for issuing safety authorisations and safety certificates.

In 2011 the Department of Railways continued with its objective that the management systems of undertakings and managers gradually become adapted to Regulations 1158/2010 and 1169/2010.

To do this, and to facilitate the process of obtaining their certificates, it has cooperated with undertakings during the drafting of documents, prior to the submission of a formal application, performing preliminary assessments of the draft documents of the safety management system and helping undertakings to interpret the different criteria contained in the aforementioned regulations.

This has enabled problems and difficulties to be avoided in subsequent assessment, and has served to shorten the actual issue times, since it has limited the supplementary information that had to be collected during the analysis of the application.

In this respect, our experience has shown that, in addition to cooperation with the railway undertakings, this is also a positive step with the consulting sector that supports these undertakings in developing their systems.

This monitoring and cooperation from the initial phases of designing the undertakings' management systems, has helped in transmitting some key concepts:

The gradual transition from traditional procedures to applying the safety management system, assuming that the operation of the undertaking in the matter of safety has to revolve around this system.

The advisability that the architecture of the safety management systems should take into account regulations 1158/2010 and 1169/2010.

The early implementation of the procedures relating to regulations 352/2009 and 445/2011.

Part A Safety Certificates

In 2011, five Part A Safety Certificates were issued.

RAILWAY UNDERTAKING	TYPE OF CERTIFICATE	DATE OF ISSUE	FEE[6]
Activa Rail;[7]	New	26/04/11	€ 11 041.89
Renfe-Operadora	Renewal	24/05/11	€ 5 520.94
Ferrocarriles del Suroeste	New	18/11/11	€ 11 041.89
Alsa Ferrocarriles	New	15/12/11	€ 11 041.89
Ferrovial Railway	New	20/12/11	€ 11 041.89

Part B Safety Certificates

The following table sets out some characteristics of the Part B safety certificates issued:

RAILWAY UNDERTAKING	TYPE OF CERTIFICATE	DATE OF ISSUE	REASONS FOR UPDATE	FEE
Continental Rail	Update	24/02/11	Extension of lines	€ 5 520.94
Activa Rail;	New	26/04/2011	--	--
Continental Rail	Update	26/04/2011	Extension of lines	€ 5 520.94
Logitren Ferroviaria	Update	27/04/11	Extension of lines	€ 5 520.94
Comsa Rail	Update	05/05/11	Extension of lines	€ 5 520.94
RENFE-Operadora	Renewal	24/05/11	--	--
Ferrocarriles del Suroeste	New	18/11/11	--	--
Alsa Ferrocarriles	New	15/12/11	--	--
Ferrovial Railway	New	20/12/11	--	--

Safety Authorisations

In 2011, the Department of Railways did not issue any safety authorisations.

6 The amount of the fee corresponds to the issue of parts A and B of the safety certificate.
7 EWSI's operations were taken over in May 2011 by Activa Rail, S.A.

G. SUPERVISION OF RAILWAY UNDERTAKINGS AND INFRASTRUCTURE MANAGERS

Until now, the NSA has audited and supervised railway undertakings' and infrastructure managers' safety management systems indirectly through these undertakings' inspections of their operations rather than by means of direct audits of the safety management system.

With regard to Part A Safety Certificates, given that they cover the safety management system, which comprises the company's operating methods, the following inspections were carried out during traffic operations:

INSPECTIONS		RAILWAY UNDERTAKINGS:
Number of inspections of RUs and IMs in 2011	Load Inspections:	958
	Technical Inspection of Equipment in Service (ITMS)	5 013
	Train Monitoring	14 464
	Inspection of trains before they go into service	3 233
	Shunting Inspections	3 633
	Alcohol and drug tests	7 824
	Inspection visits to Driving Centres, Residences, Production and Management Centres	556
	INFRASTRUCTURE MANAGERS	
	6 299 inspections carried out (4 047 scheduled inspections and audits + 2 252 unscheduled inspections) / 3 861 planned inspections. Result: 2 133 anomalies detected, 61% of them low level, 19% medium level and 20% high level[8], the last of these being basically concentrated in wagon and load inspections.	

[8] **Anomalies, types and measures:**

For handling, analysis and subsequent action, three types of anomalies have been identified, each level being associated with different measures:

Low level: Anomaly not entailing the establishment of immediate restrictions on the infrastructure (speed limits, etc.) or stock.

Medium level: Anomaly entailing the establishment of immediate restrictions on the infrastructure or stock but allowing traffic to continue running on them subject to immediate repair or overhaul.

High level: Anomaly preventing any kind of traffic where it is linked to the infrastructure or the stock.

Inspections for Part B, dealing mainly with the existence of properly qualified staff and authorised rolling stock, are carried out by:

- Checking that staff are properly qualified before authorising operations.
- Inspecting rolling stock and locomotives.

Approximately 95% of these inspections are carried out in accordance with the safety plans.

In any event, in the course of 2011, no significant anomaly arose that could have led to:

- Modification, revocation or suspension of, or a significant warning on safety certificates.
- Complaints by ADIF about operators or vice versa.

H. REPORT ON THE ADOPTION OF COMMON SAFETY METHODS (CSMS) FOR RISK EVALUATION AND ASSESSMENT

In Spain, on 10 December 2008, the Department of Railway Infrastructure approved Circular Resolution 10/2008 relating to an internal legal document based on the existing draft versions of Regulation (EC) No 352/2009 at this date.

The aforementioned resolution regulated the procedure for authorising the placing in service of rolling stock already authorised, which had undergone modifications, introducing the most important concepts of the Common Safety Method for risk assessment and analysis.

With the entry into force of part of Regulation (EC) No 352/2009 in mid-2010, the drafting of a new Circular Resolution was initiated with the aim of amending the existing Circular Resolution (10/2008), adapting it to the CSM Regulation for Risk Assessment. The document, shown below, was published on 25 February 2011:

- **Circular Resolution 1/2011 on the validation procedure for modified railway vehicles, pursuant to Order FOM/233/2006 of 31 January, on rolling stock.**

Listed below are several notable examples of the application of Circular Resolution No 1/2011:

- Adaptation of Iberian gauge Spanish vehicles for international traffic:
  - Adaptation of powder wagons.
  - Change of bogies for locomotives
- Adaptation of UIC gauge vehicles to the Spanish national network:
  - Change of bogies for wagons and locomotives.
  - Fit out the vehicle to have running gear interchangeably for both widths.
- Increased number of places available for passengers in self-propelled train sections.
- Replacement of data recorders, with other more modern, latest generation equipment.
- Installation of new electronic equipment, ‘Onboard communications platform for operating local and medium range services’, consisting of an onboard information and communication system, separate from the components related to traffic safety or the train itself.
- Technical modifications for improving the operation of mechanical components of the vehicles.
  - Mechanisation of the upper section of bogies.
  - Adjustment of the main thyristor module trigger value and replacement of earthing systems in axle-boxes.
  - Incorporation of new additional outside electrical outlets.

  - Improvement in the reliability of automatic couplings, GTO trigger boards and replacement of remote indicators in self-propelled train sections.
  - Installation of a blown headlamp bulb detector.
  - Change of adjustment between draw connecting rod and body pin in locomotives.
  - Change of reaction rod screws.
  - Change of self-propelled train section engines.
  - Installation of a fire detection and fire-fighting system in the upper chamber.
  - Installation of a cab fan.
  - Installation of a device for signalling incorrect pressure in bogie brake cylinders in locomotives.
  - Installation of parking brake on platforms.
- Modification to passenger access doors.
  - Replacement of a system with door closure at the request of the driver without warning to passengers, by another with visual and audible warnings and mechanisms for preventing the risk of false indications of a closed door, when small items are caught at the bottom of the door.
  - In a series of self-propelled vehicles, elimination of the risk of it being impossible to open automatic doors for access to the train, using the emergency manual release system in certain circumstances, by implementing a system of manual opening with sound and light warnings.
- Conversion from a volume of 65 m^3 to 45 m^3 in hopper wagons.
- Making holes in the platform of wagons for transporting military vehicles.
- Installation of a generator set in passenger coaches.
- Increase in the number of coaches in modular compositions of Local Trains.
- Modification to sanding management on variable gauge vehicles.
- Software modifications in vehicles of a different type, such as:
  - Improvements for optimising train performance in reacting to the occurrence of specific faults.
  - Improved diagnosis for maintenance by optimising its accuracy in troubleshooting repairs.
  - Improvements for making driving easier for drivers.
  - Solving resetting problems at the supervision position when trains enter parking mode.
  - Activation of diagnosis for the ETCS signalling system level 2.
  - Upgrading the legal recorder software.
  - Changes in the automatic sanding system.

- Change in ATC and TCU levels.

In general, modifications were not considered significant when they related to technical changes and those of small- and medium-scale operation, which in most cases did not involve the vehicle being out of action for more than one or two days, such as changes in train software releases. By contrast, those considered significant had to involve the participation of both the main contractors and subcontractors and assessment and certification bodies (e.g. in the commissioning of ERTMS-ETCS equipment on vehicles in operation).

Other changes that were found in this period and which may have been subject to Regulation (EC) No 352/2009 would include:

- Organisational changes:
  - Introduction of organisational changes in the safety structure of the railway undertaking.
- Operational changes:
  - Extending the scope of operations, due to starting the operation of new lines.
  - Bringing new trains into operation.
  - Entry into force of new regulations or amendments to existing ones.
  - Changes in the assignment of driving staff, due to transfers and selection procedures.

Finally, it should be pointed out that the Department of Railways (DGIF), acting as the Spanish National Safety Authority, while waiting for a system of accreditation and/or **RECOGNITION OF ASSESSMENT BODIES** to be defined, recognises safety assessors as laid down in Annex II to Regulation (EC) No 352/2009.

In 2011, the following organisations were recognised:

UNDERTAKING	**SCOPE**	**CONCESSION ACCORDING TO REGULATION 352/2009**
INECO	Infrastructure, Energy Control, Command, Signalling and Telecommunications Rolling stock	22/03/2011
ALTRAN TECHNOLOGIES	Infrastructure Energy Control, Command, Signalling and Telecommunications Rolling stock	30/09/2011
ARDANUY	Infrastructure Energy Control, Command, Signalling and Telecommunications	28/02/2011

CETREN	Infrastructure Energy Control, Command, Signalling and Telecommunications Rolling stock	05/05/2011
SILVER ATENA	Control, Command, Signalling and Telecommunications	30/09/2011
SIEMENS	Control, Command, Signalling and Telecommunications	04/08/2011
LLOYD'S REGISTER SPAIN, S.A.	Infrastructure Energy Control, Command, Signalling and Telecommunications Rolling stock	07/06/2011
AKKA	Infrastructure Energy Control, Command, Signalling and Telecommunications Rolling stock	25/11/2011

These recognitions are being made on a temporary and provisional basis, until, with the revision of Regulation (EC) No 352/2009, the accreditation requirements and procedures for safety assessment bodies are more precisely defined. They must be reviewed when the new regulation is adopted.

From the experience of applying this regulation over the past year, the following conclusions may be drawn

Although the application of the regulation is becoming normal and widespread on rolling stock, thanks to Resolution 1/2011 (and its previous version 10/2008), on the other subsystems it is still rather limited (especially when it comes to organisational or operational changes).

In general, although it has been steadily improving, the perception of the sector regarding Regulation 352/2009 is that implementation is complicated for some kinds of changes.

Some uncertainty still remains in the industry about the interrelationship of this Regulation with the commissioning or network access processes, or its relationship with other risk analyses, such as those conducted under CENELEC standards 50126, 50128 and 50129.

The current criteria for recognition/accreditation of assessment bodies lead to some doubts and are somewhat imprecise. The revision of the regulation needs to go further into these areas, especially for those cases where it is intended that their reports have cross-border validity. In our case, a temporary and provisional solution has been found.

Similarly, the contents of the safety assessment reports are also not too clear. In addition to the clarifications that may be made in Regulation 352/2009, it would be advisable to have guides or models of contents for these reports.

I. CONCLUSIONS OF THE NSA – PRIORITIES

In 2011, as in previous years, the functions of the Spanish National Safety Authority were performed by the Department of Railways, which is in a gradual process of consolidating its expertise regarding safety and interoperability.

Apart from all the activities that are already being carried out, in the next few years, the main lines of work to be stepped up must be as follows:

To consolidate a structure allowing it to adequately exercise the increasing number of functions that are progressively being assigned to it, with sufficient levels of independence from other actors in the system.

To increase the sector's profile, by enhancing the functions of dissemination (especially of the trends set by the European Union) and improving awareness of its expertise through the web, press releases, conferences, etc.

To give expression to the working methods that are gradually being adopted within the NSA, in internal procedures and guidelines for those involved.

To continue with monitoring railway vehicle maintenance, through the inspection of maintenance centres and preparing for the issue of maintenance system certificates for the entities in charge of maintaining wagons.

To improve system supervision activities, in order to be prepared for future implementation of the 'CSM on Supervision'.

To adapt procedures for implementing the Interoperability Directive and Recommendation 2011/2017 ('DV29'), in all subsystems and vehicles.

To step up monitoring the Rail Accident Investigation Commission (CIAF) safety recommendations following accidents, and ensure that the experiences from incidents and accidents are taken into account in the procedures of the railway undertakings.

To continue with plans to eliminate or protect level crossings, as well as fencing them, and to eliminate unauthorised track access points, since they are responsible for the majority of accidents involving railway rolling stock.

To continue with the active participation of the Spanish NSA in the various European working groups, particularly in the European Railway Agency, by putting forward our suggestions and opinions.

To open channels of communication with other national authorities for setting up international traffic services.

To continue with the powers of authority in the ERTMS system as an arbiter among the various actors, for optimising procedures for implementing and facilitating gradual migration to the latest versions.

J. SOURCES OF INFORMATION

Bibliography:

[1] *'Network Statement 2012 - Updated'* – ADIF.

[2] *'Network Statement 2012'* – TP Ferro.

[3] *DIRECTIVE 2004/49/EC* OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004.

[4] *'Annual Accident Report, 2011'* – Department of Traffic Safety, Renfe-Operadora.

[5] *'Annual Report of Rail Accidents on the General Interest Rail Network, 2011'* – Department of Traffic Safety, ADIF.

[6] *'2011 Annual Report on Traffic Safety'* – Department of Traffic Safety, RENFE-Operadora.

[7] *'Safety Report 2011'* – Department of Safety and Training, Continental Rail.

[8] *'Annual Report 2011'* – Comsa Rail Transport, S.A.

[9] *'Annual Safety Report', 2011'* – Activa Rail

[10] *'Annual Safety Report, 2011'* – Department of Traffic Safety, ADIF.

[11] *'Annual Railway Operation and Safety Report, 2011''* – TP Ferro.

[12] *'Annual Safety Report, 2011'* – Tracción Rail.

[13] *'Annual Safety Report, 2012'* – Logitren Ferroviaria S.A.

[14] *'SNCF Annual Safety Report, Travel* in Spain – 2011'

[15] *ROYAL DECREE 810/2007* of 22 June approving the Regulations on Traffic Safety on the General Interest Rail Network.

Websites consulted:

[16] www.fomento.es

[17] www.adif.es

[18] www.tpferro.com

In addition to all the above references, further information supplied by the various rail operators and railway infrastructure managers was used in writing this report.

K. ANNEXES

ANNEX A: Information on the railway structure

ANNEX B: Organisational charts of the National Safety Authority

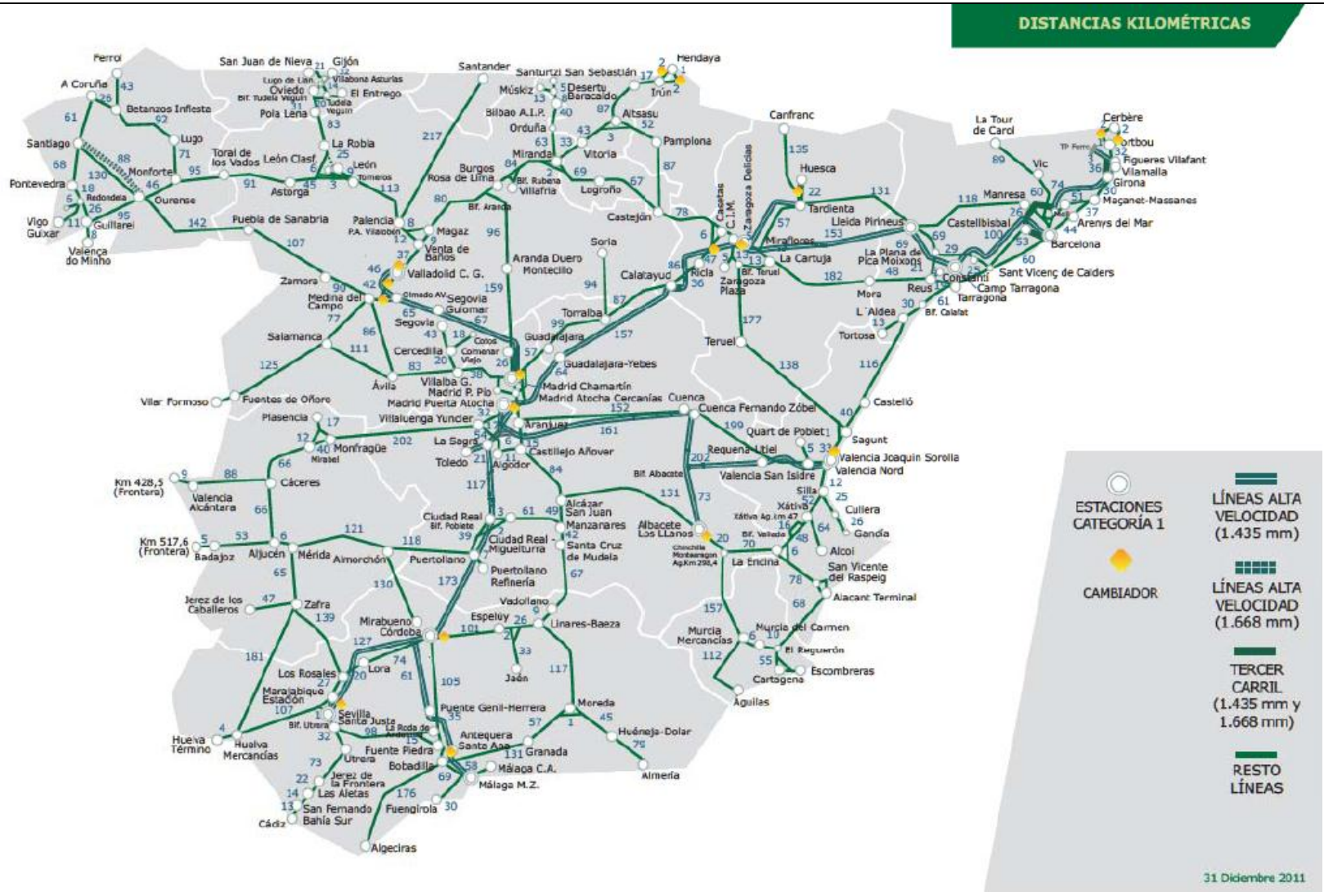
ANNEX C: CSI data – Definitions used

ANNEX D: Significant changes in legislation and regulations

ANNEX E: Trends in safety certification and authorisation – Numerical data

ANNEX A: Information on the railway structure

ANNEX A.1: Network plans



DISTANCES IN KILOMETRES

CATEGORY 1 STATIONS

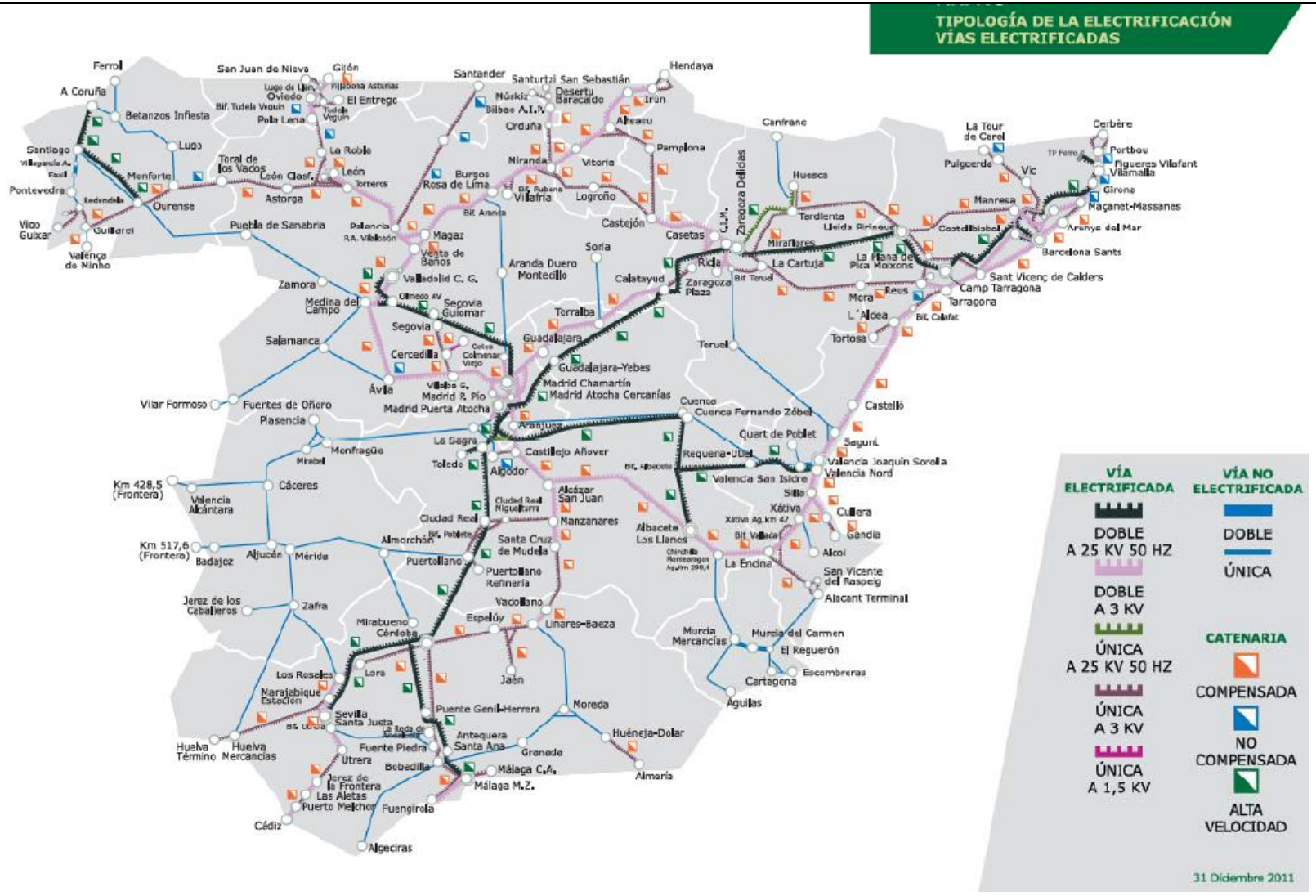
HIGH SPEED LINES

GAUGE CHANGER

THIRD RAIL

OTHER LINES

Source: Network Statement 2012. ADIF



TYPES OF ELECTRIFICATION

ELECTRIFIED LINE

NON-ELECTRIFIED LINE

DOUBLE

SINGLE

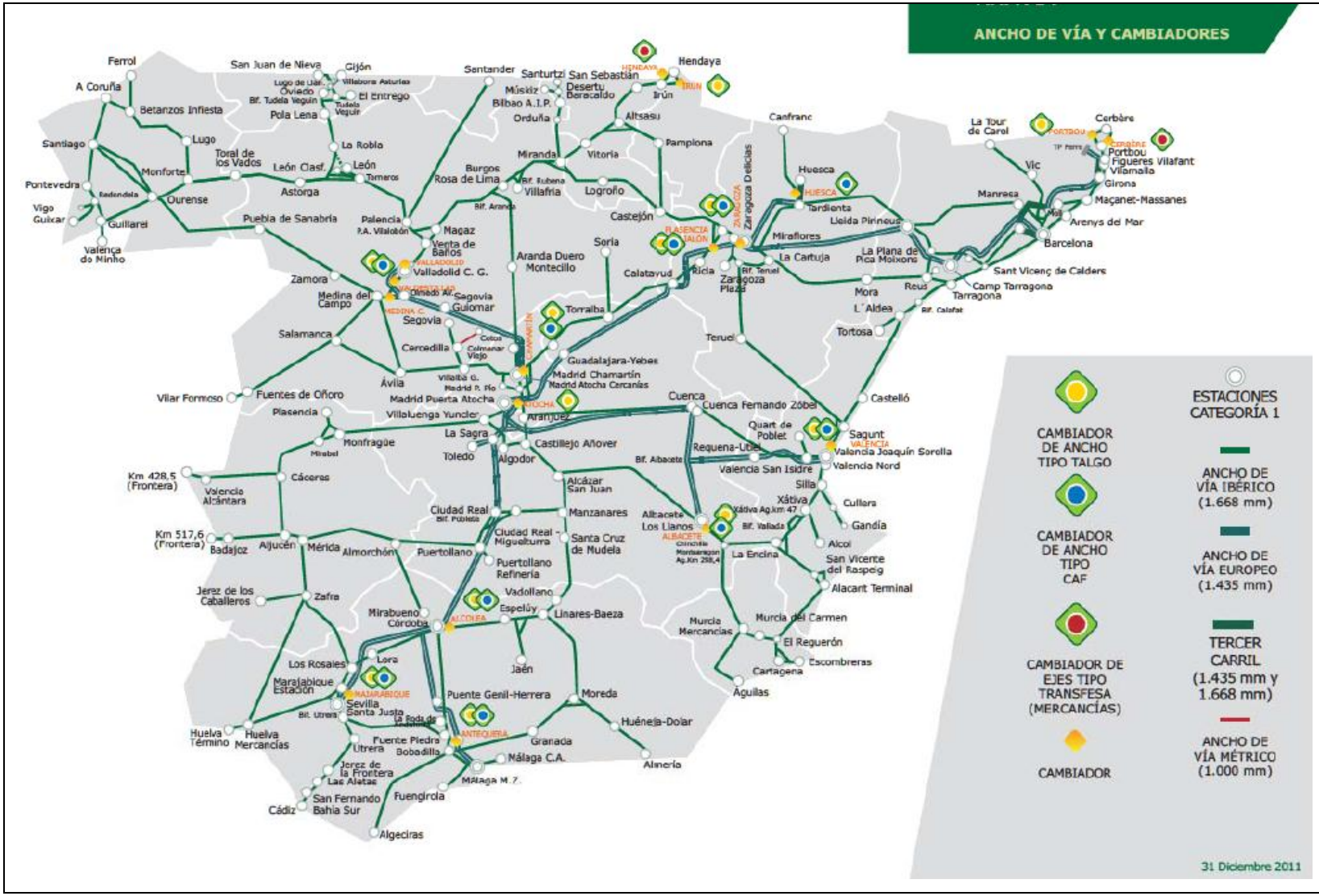
CATENARY

COMPENSATED

UNCOMPENSATED

HIGH SPEED

Source: Network Statement 2012. ADIF



TRACK GAUGE AND GAUGE CHANGERS

TALGO GAUGE-CHANGE SYSTEM

CAF GAUGE-CHANGE SYSTEM

TRANFESA AXLE-CHANGING SYSTEM (FREIGHT)

GAUGE CHANGER

CATEGORY 1 STATIONS

IBERIAN TRACK GAUGE

EUROPEAN TRACK GAUGE

THIRD RAIL

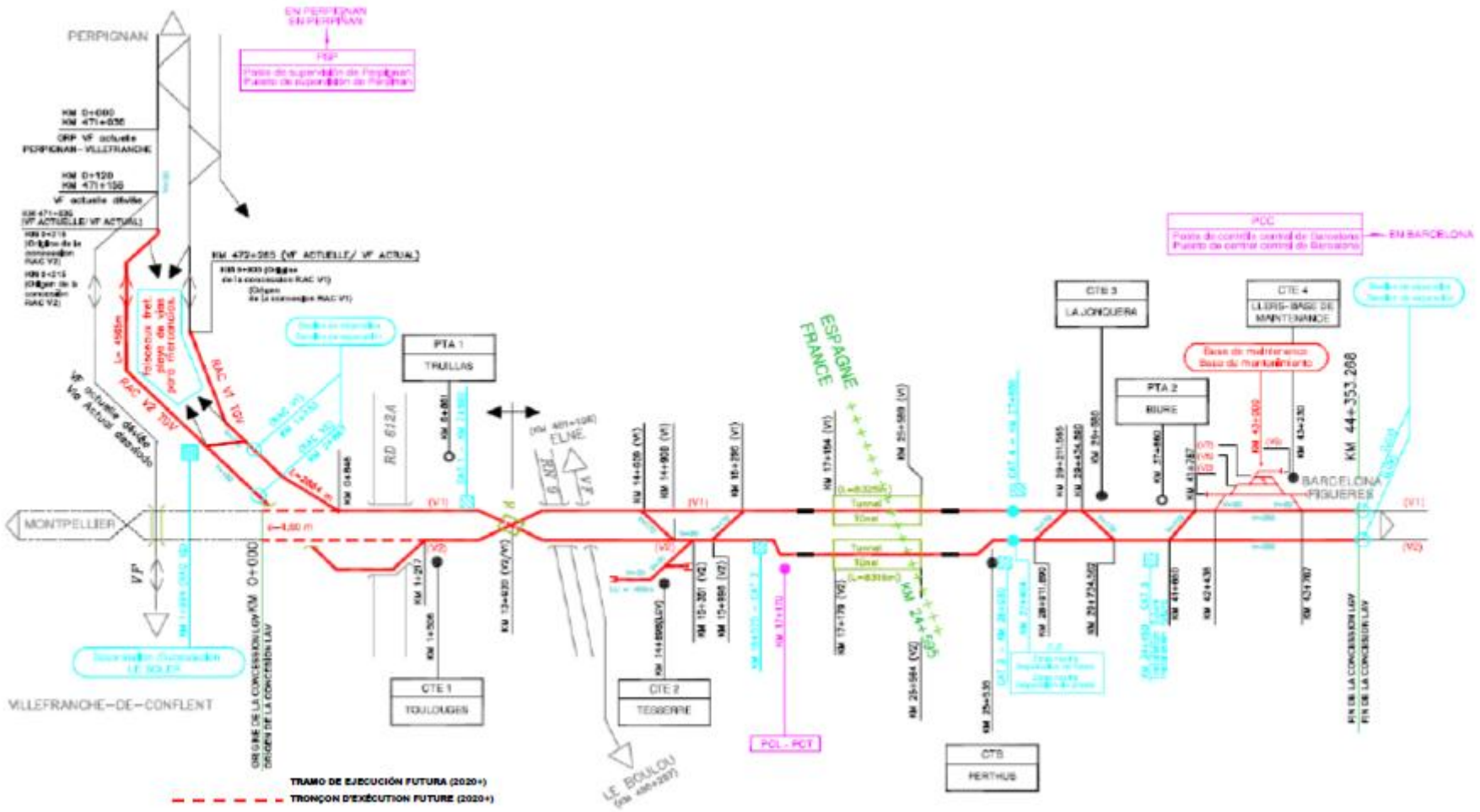
METRIC TRACK GAUGE

31 December 2011

Source: Network Statement 2012. ADIF

Geographical scope of the International Section

Source: Network Statement 2012. TP Ferro



Connection points with the two rail networks (International Section)

Source: Network Statement 2012. TP Ferro

ANNEX A.2: List of infrastructure managers and railway undertakings with safety certificates

A.2.1. Rail infrastructure managers

Name	Address	Website / Link to network statement	Safety authorisation (number / date)	Date of commence-ment of trading	Total track length/gauge	Length of electrified track / network voltage	Total length of double/single track	Total length of high-speed line	ATP equipment used	Number of level crossings	Number of signals
ADIF	3, Calle Sor Ángela de la Cruz, Madrid 28020, Spain	www.adif.es	ES2120100001 29/04/2010	01/01/2005	2 099 km / 1 435 mm 11 708 km / 1 668 mm 18 km / 1 000 mm 120 km / mixed 13 945 total km	6 434 km line / 3 000 Vdc 2 304 km line / 25 kVac 8 738 km electrified	8 558 km single track 5,387 km double track 13 945 total km	2 304 km	11 993 km / ASFA 1 712 km / ERTMS 498 km / LZB 449 km / ATP-EBICAB	2 296	[No data]
TP Ferro	Ctra. Llers a Hostalets GIP-5107, Km. 1 Llers 17730 Spain	www.tpferro.com	ES2120100002 15/12/2010	19/12/2010	20 km/1 435mm.	20 km / 25 000 V (ac)	20 km double track	20 km	ERTMS	0	[No data]

A.2.2. Railway Undertakings

Name	Address	Website	Safety certificate 2001/14/EC (Number / date)	Safety certificate A-B 2004/49/EC (Number / date)	Date of commence-ment of trading	Type of traffic (freight, etc.)	Number of locomotives	Number of train sets/ suburban train set elements	Number of coaches/ wagons	Number of drivers/safety personnel	Volume of passenger transport	Volume of freight transport
Acciona Rail Services	18-20, Avda. de Suiza, Coslada 28820, (Madrid) Spain	www.acciona.es	ES1120060003 ES1220060003 27/12/2006	-	28/01/2007	Freight	-	-	-	-	-	< 500 mill. Ton-km/year
Activa Rail;[9]	1, Calle Musgo, Madrid 28023 Spain	http://www.transfesa.es/index.htm	-	ES1120110001 ES1220110003 26/04/2011 (new)	27/06/2008[10]	Freight	6	-	30 wagons	Drivers: 29 / certificate B Safety: 2	-	< 500 mill. Ton-km/year
Alsa Ferrocarril	60, Avda. de la Industria, 28760 Tres Cantos (Madrid) Spain	http://www.alsa.es/	-	ES1120110004 ES1120110008 15/12/2011 (new)	-	Freight	-	-	-	-	-	< 500 mill. Ton-km/year

9 The English Welsh & Scottish Railway International Limited (EWSI) Branch in Spain was taken over in May 2011 by Activa Rail, S.A.

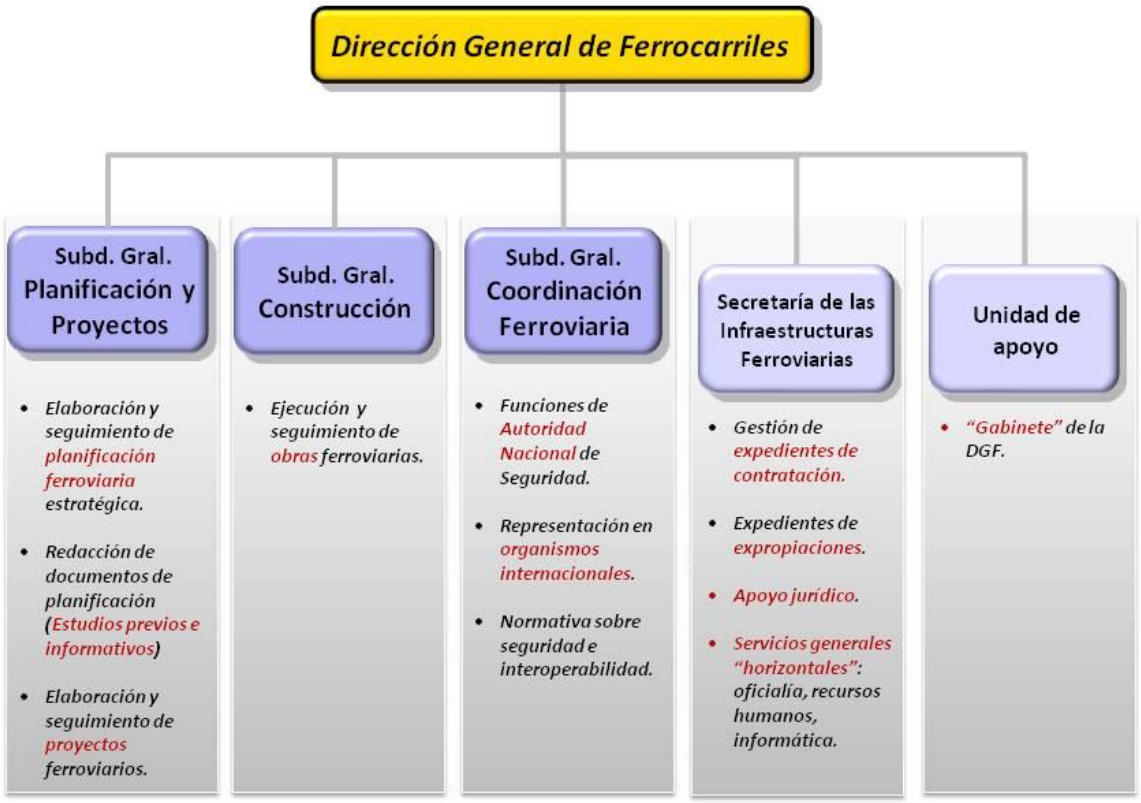
10 EWSI Branch in Spain started business.

Name	Address	Website	Safety certificate 2001/14/EC (Number / date)	Safety certificate A-B 2004/49/EC (Number / date)	Date of commence-ment of trading	Type of traffic (freight, etc.)	Number of locomotives	Number of train sets/ suburban train set elements	Number of coaches/ wagons	Number of drivers/safety personnel	Volume of passenger transport	Volume of freight transport
Comsa Rail Transport	47, C/ Viriato, Barcelona 08014 Spain	www.comsaemte.com	-	ES1220110002 05/05/2011 (extension)	15/01/2008	Freight	9 (own) 7 (Takargo)	-	Wagons: 100 (own) 47 (hired) 125 (Takargo)	Drivers: 40 / certificate B 5 / certificate A Safety: 2	-	< 500 mill. Ton-km/year
Continental Rail	11 - 2º I, C/ Orense, 28020 Madrid Spain	www.continentalrail.es	-	ES1220110004 26/04/2011 (extension)	15/02/2007	Freight	10	-	Wagons: 53 (own) 121 (hired)	-	-	< 500 mill. Ton-km/year
FESUR	32, Ctra. Badajoz, 06380 Jerez de los Caballeros (Badajoz) Spain	http://www.grupogea21.com/empresas_transporte.php	-	ES1120110003 ES1220110007 18/11/2011 (new)	-	Freight	-	-	-	-	-	< 500 mill. Ton-km/year
Ferrovial Railway	42, C/ Ribera del Loira, Madrid 28042 Spain	-	-	ES1120110005 ES1220110009 20/12/11 (new)	-	Freight	-	-	-	-	-	< 500 mill. Ton-km/year
Logitren Ferroviaria	332, Avda. del Puerto, Valencia 46024 Spain	www.logitren.es	-	ES1220110005 27/04/2011 (extension)	30/06/2010	Freight	2	-	18 wagons	Drivers: 9 / certificate B Safety: 6	-	< 500 mill. Ton-km/year
RENFE Operadora	110, Avenida Pio XII, Madrid 28036 Spain	www.renfe.es	-	ES1120110002 ES1220110006 24/05/2011 (refurbishment)	01/01/2005	Passengers Freight	512	1 138	Coaches: 1 215 Wagons: 12 344	Drivers: 5 128 Safety: 203	>200 mill. passengers / year	> 500 mill. Ton-km/year
Tracción Rail	5, C/ Almendralejo, Seville 41019 Spain	www.azvi.es	-	ES1220090005 24/07/2009 (extension)	02/2008	Freight	4	-	-	Drivers: 9 Safety: 1	-	< 500 mill. Ton-km/year
SNCF[11]	76, Boulevard Magenta Paris 75010 France	www.sncf.com	-	ES1220100007 15/12/2010 (new)	19/12/2010	Passengers	-	10	-	Drivers: 8	< 200 mill. passengers / year	-

[11] On 19 December 2010, SNCF began the passenger transport service on the line between Perpignan (France) and Figueres (Spain), with daily return journeys.

ANNEX B: Organisational charts of the National Safety Authority

B.1. Charts: Internal organisation

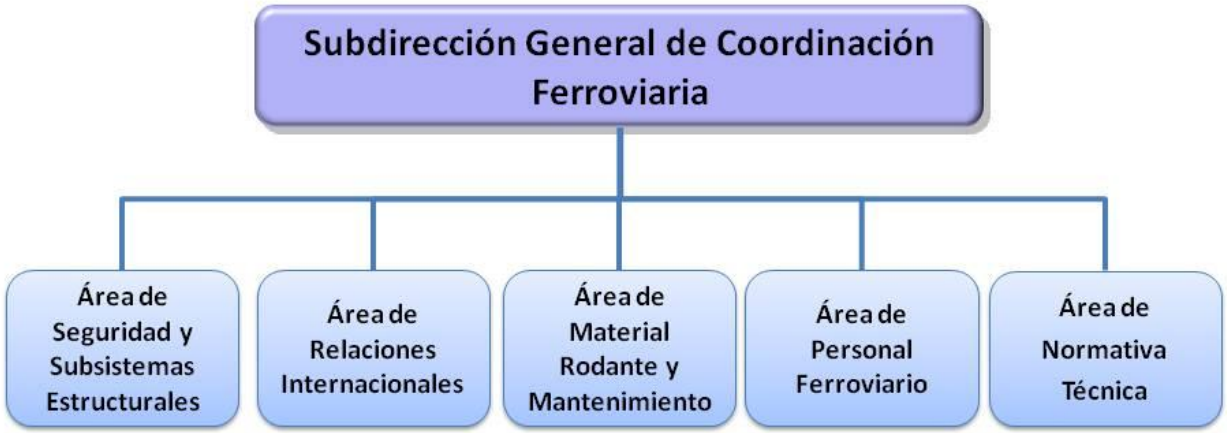


(*) Estructura orgánica procedente del Real Decreto 452/2012, de 5 de marzo.

Department of Railways

Planning and Projects Sub-Dept.	Construction Sub-Dept.	Railway Coordination Sub-Dept.	Ministry of Railway Infrastructures	Support Unit
▪ *Preparation and monitoring of strategic rail planning.*	▪ *Execution and monitoring of rail works.*	▪ *National Safety Authority functions.*	▪ *Contract file management.*	▪ *'Cabinet' of the DGF.*
▪ *Drafting planning documents (Preliminary and information studies)*		▪ *Representation in international organisations.*	▪ *Expropriation files.*	
▪ *Preparation and monitoring of rail projects.*		▪ *Rules on interoperability safety.*	▪ *Legal support.*	
			▪ *General 'horizontal' services: clerical work, human resources, IT.*	

(*) **Organic structure arising from Royal Decree 452/2012 of 5 March.**



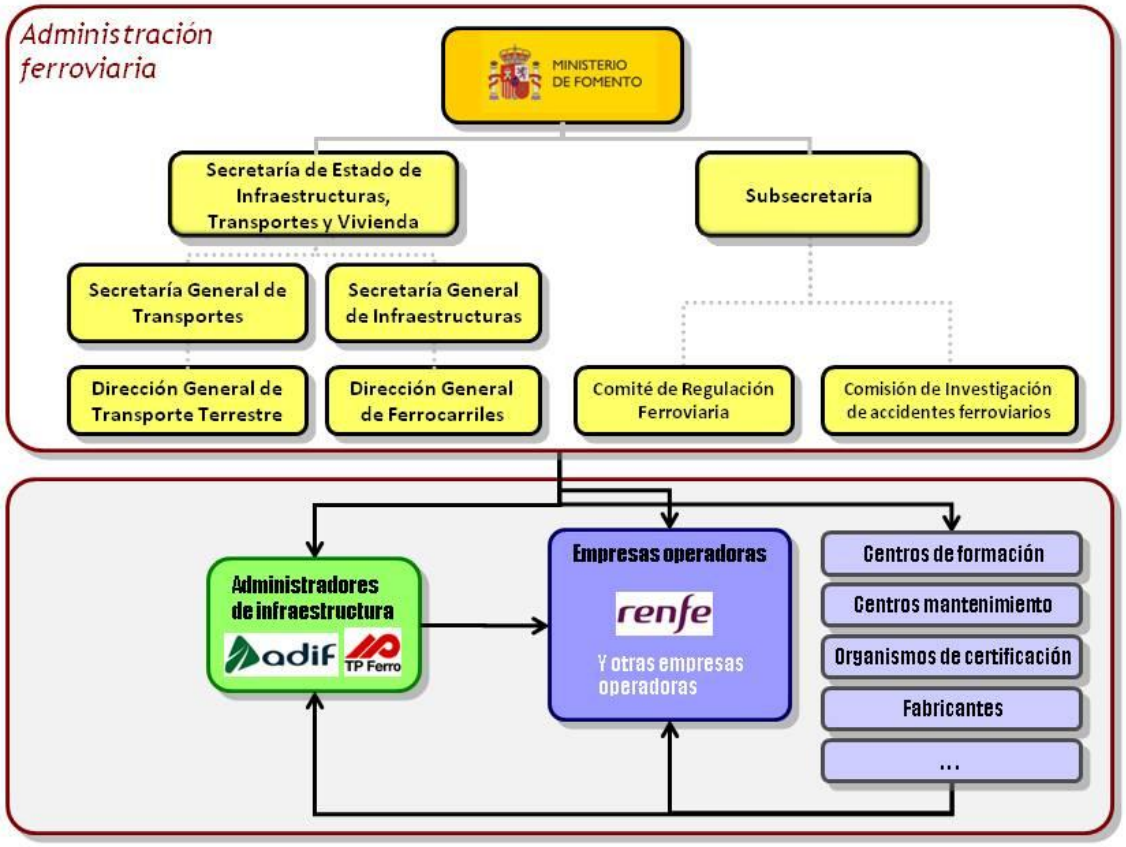
(*) Estructura orgánica procedente del Real Decreto 452/2012, de 5 de marzo.

Railway Coordination Sub-Department

Safety and Structural Subsystems	International Relations	Rolling Stock and Maintenance	Railway Staff	Technical Regulations

(*) Organic structure arising from Royal Decree 452/2012 of 5 March.

B.2. Chart: Relationship with other national bodies



(*) Estructura orgánica procedente del Real Decreto 452/2012, de 5 de marzo.

Railway Administration	**MINISTRY OF INFRASTRUCTURE AND TRANSPORT**		
Secretary of State for Infrastructure, Transport and Housing	Undersecretary		

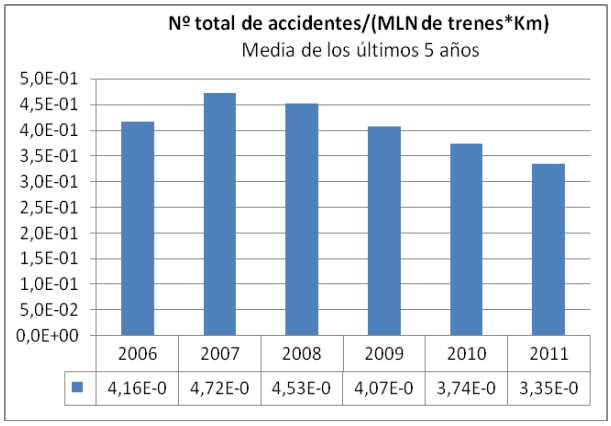
General Secretary for Transport	General Secretariat for Infrastructure		
Department of Land Transport	Department of Railways	Rail Regulation Committee	Rail Accident Investigation Commission

Infrastructure manager **ADIF TP Ferro**	**Operating undertakings** **RENFE** **and other operating undertakings**	**Training centres** **Maintenance centres** **Certification bodies** **Manufacturers** **...**

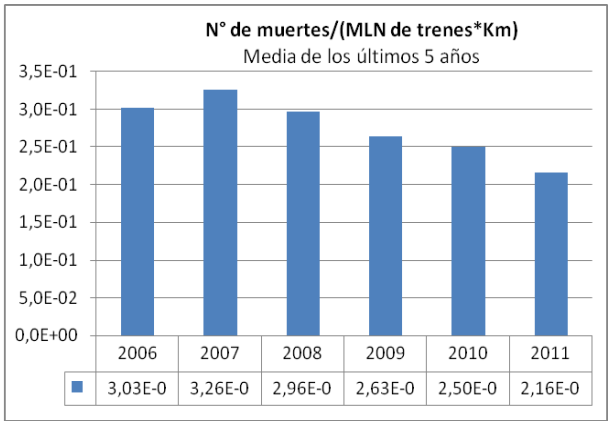
ANNEX C: CSI data – Definitions used

C.1. CSI DATA

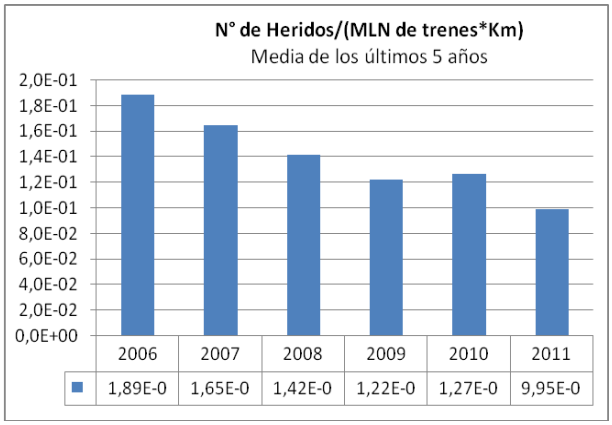
OVERALL SUMMARY



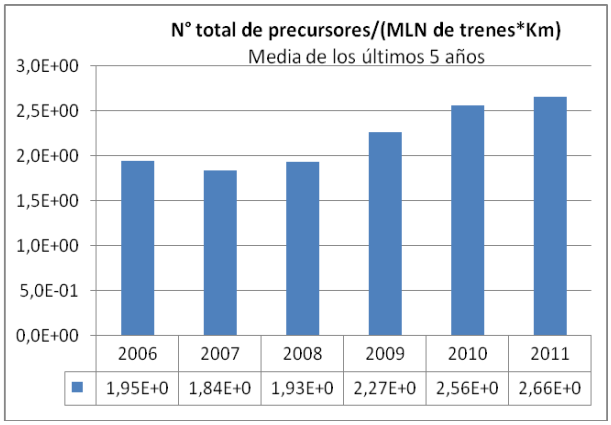
Total No of accidents/ (MLN trains*km)
Average of the last 5 years



No of fatalities/(MLN trains*km)
Average of the last 5 years



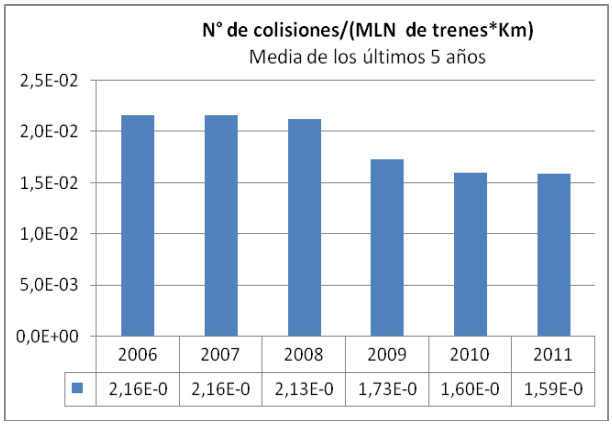
No of Injured/(MLN trains*km)
Average of the last 5 years



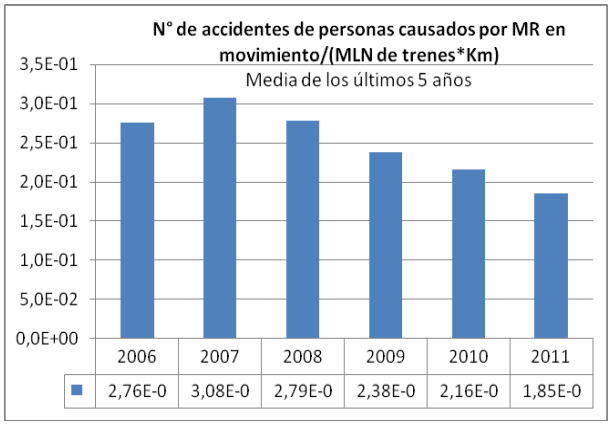
Total No of precursors/ (MLN trains*km)
Average of the last 5 years

2012 report: values related to the average for 2007, 2008, 2009, 2010 and 2011.

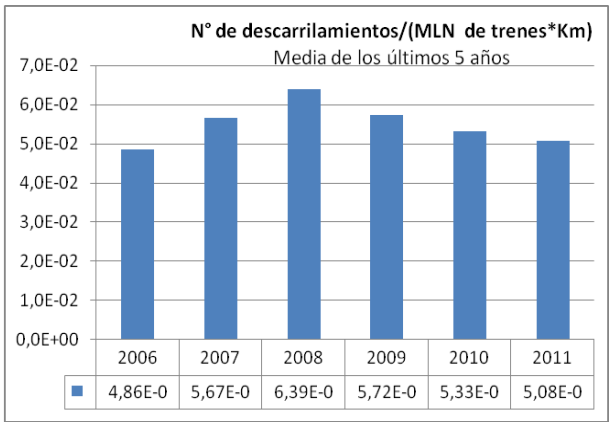
ACCIDENTS, BY TYPE



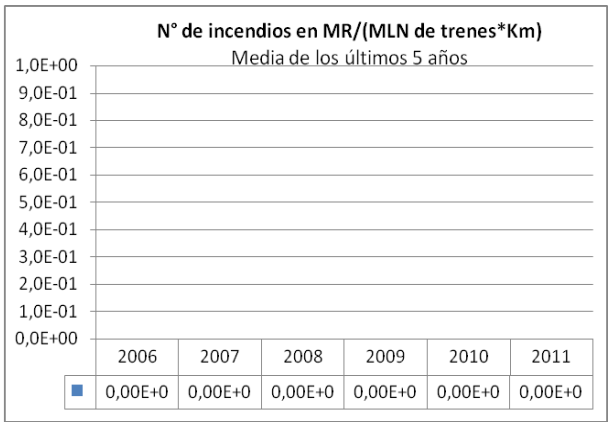
No of collisions/ (MLN trains*km)
Average of the last 5 years



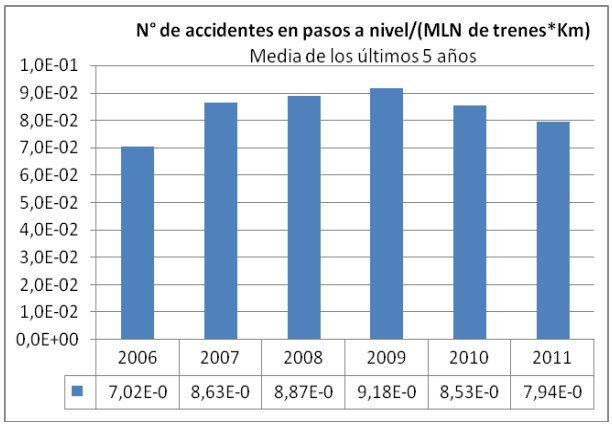
No of accidents to persons caused by RS in motion/(MLN trains*km)
Average of the last 5 years



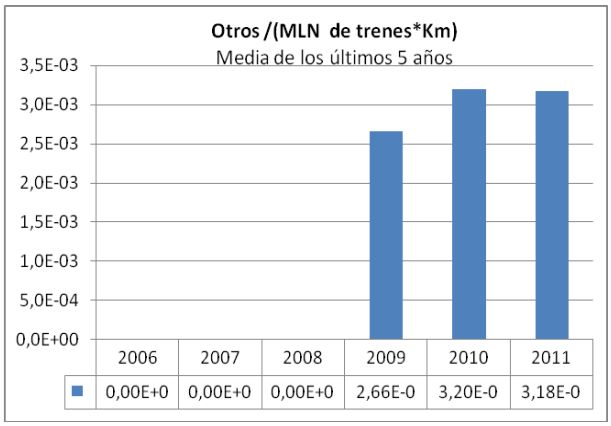
No of derailments/ (MLN trains*km)
Average of the last 5 years



No of fires in RS/ (MLN trains*km)
Average of the last 5 years



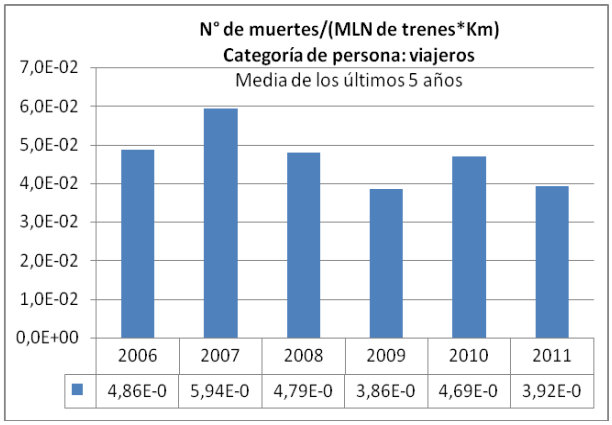
No of accidents on level crossings/ (MLN trains*km)
Average of the last 5 years



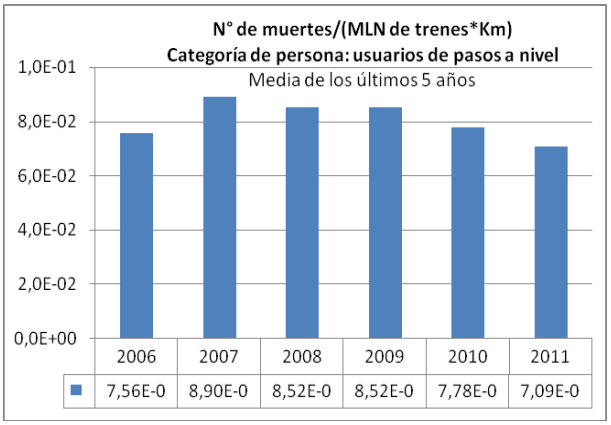
Other/ (MLN trains*km)
Average of the last 5 years

2012 report: values related to the average for 2007, 2008, 2009, 2010 and 2011.

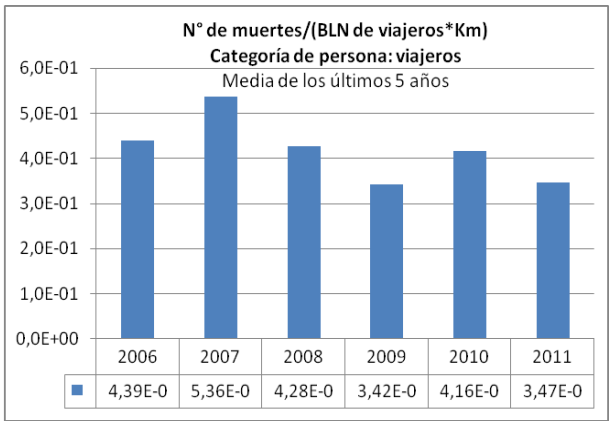
FATALITIES, BY CATEGORY OF PERSONS INVOLVED



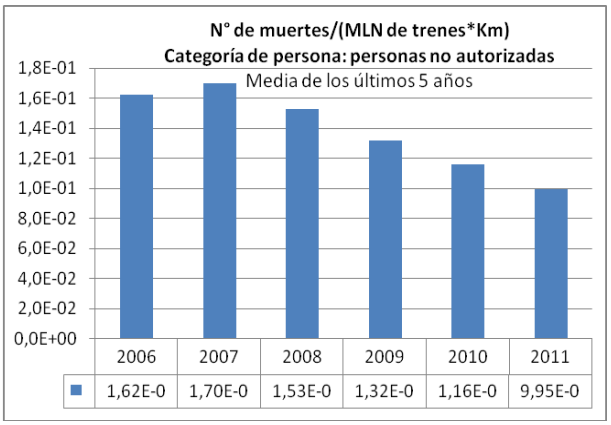
No of fatalities/ (MLN trains*km)
Category of person: passengers
Average of the last 5 years



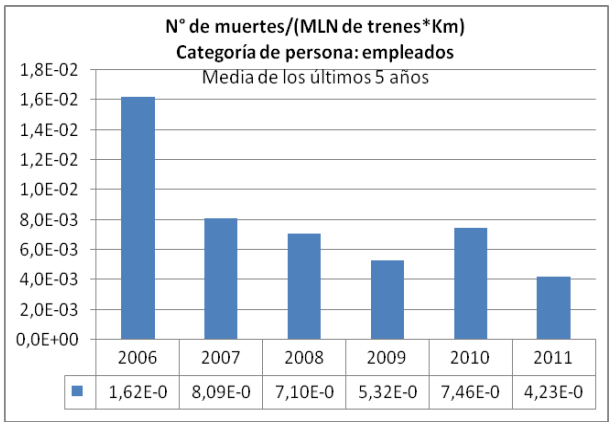
No of fatalities/ (MLN trains*km)
Category of person: level crossing users
Average of the last 5 years



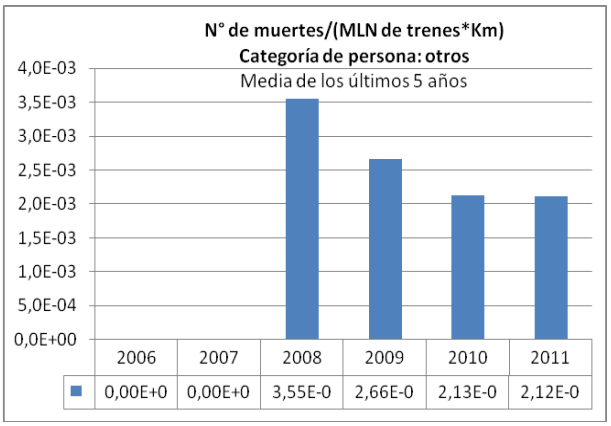
No of fatalities/ (BLN passengers*km)
Category of person: passengers
Average of the last 5 years



No of fatalities/ (MLN trains*km)
Category of person: unauthorised persons
Average of the last 5 years



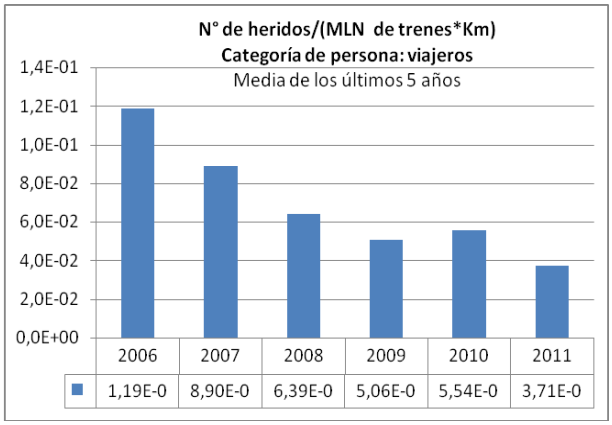
No of fatalities/ (MLN trains*km)
Category of person: employees
Average of the last 5 years



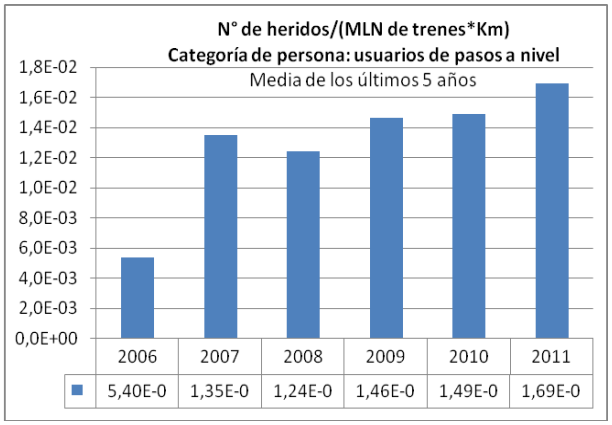
No of fatalities/ (MLN trains*km)
Category of person: others
Average of the last 5 years

2012 report: values related to the average for 2007, 2008, 2009, 2010 and 2011.

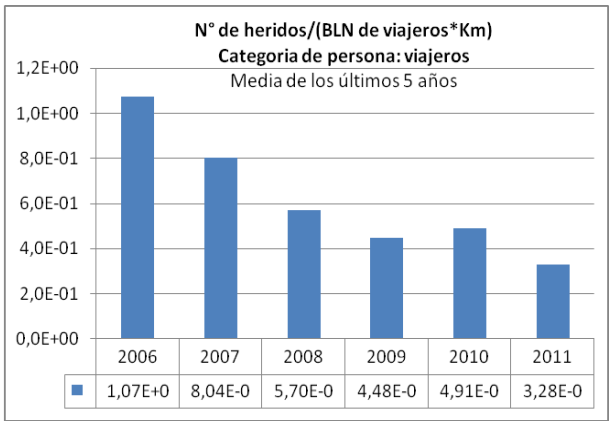
INJURED, BY CATEGORY OF PERSONS INVOLVED



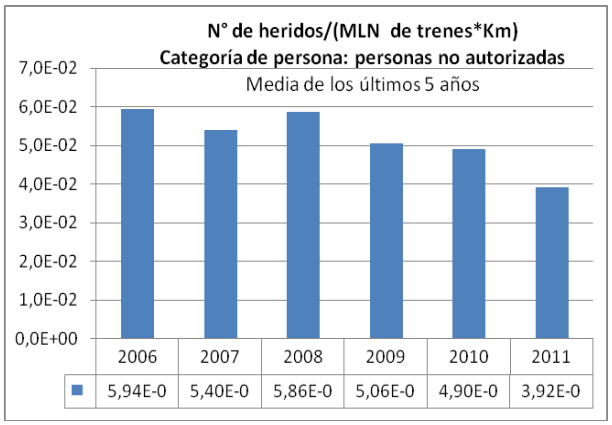
No of injured/ (MLN trains*km)
Category of person: passengers
Average of the last 5 years



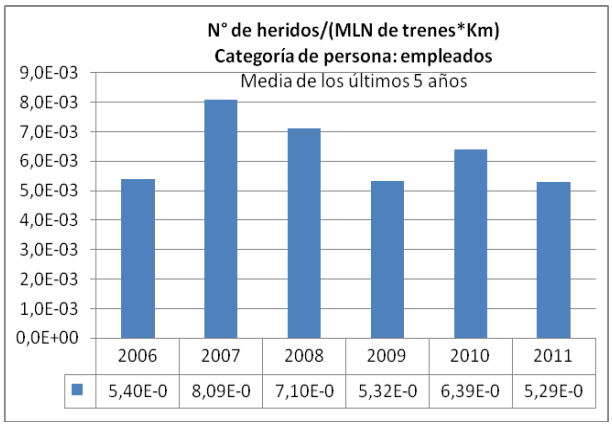
No of injured/ (MLN trains*km)
Category of person: level crossing users
Average of the last 5 years



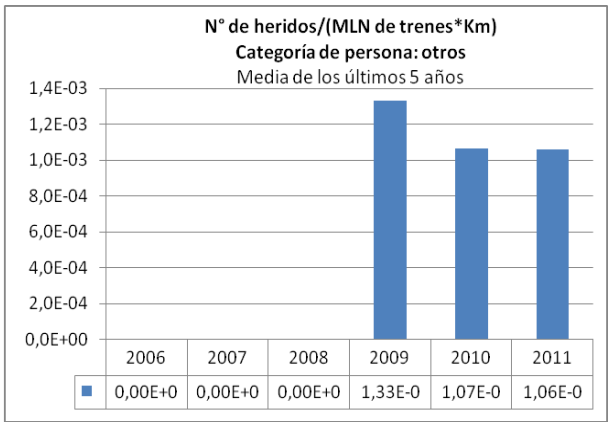
No of injured/ (BLN passengers*km)
Category of person: passengers
Average of the last 5 years



No of injured/ (MLN trains*km)
Category of person: unauthorised persons
Average of the last 5 years



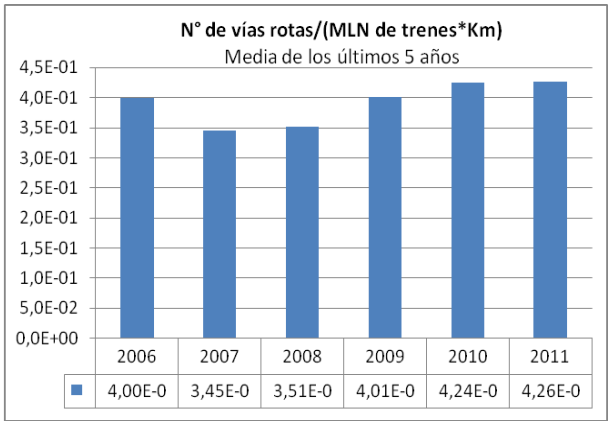
No of injured/ (MLN trains*km)
Category of person: employees
Average of the last 5 years



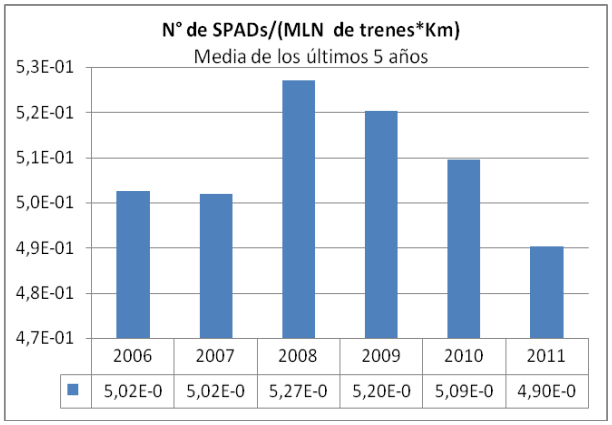
No of injured/ (MLN trains*km)
Category of person: others
Average of the last 5 years

2012 report: values related to the average for 2007, 2008, 2009, 2010 and 2011.

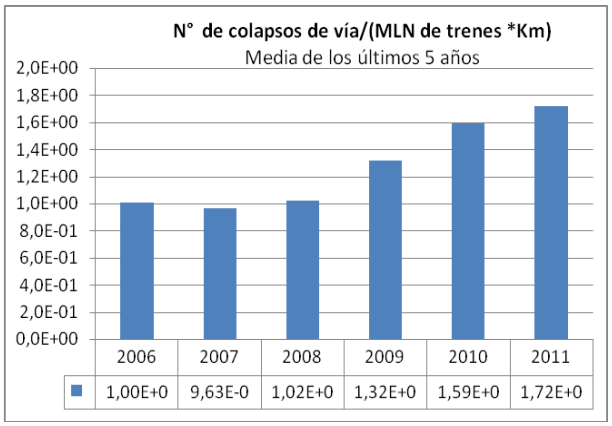
ACCIDENT PRECURSORS



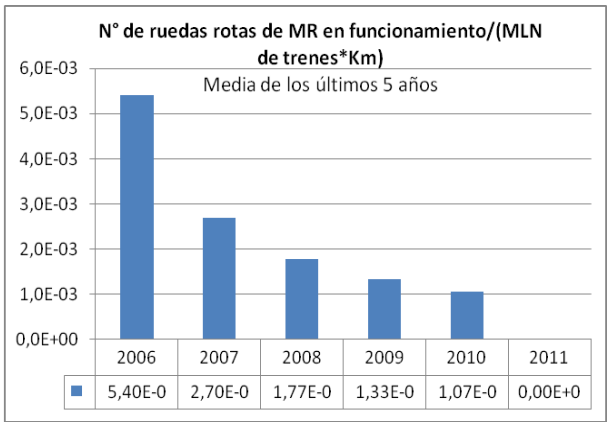
No of broken rails/ (MLN trains*km)
Average of the last 5 years



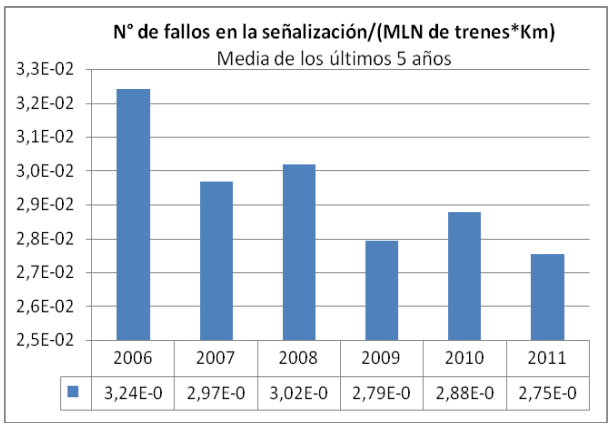
No of signals passed at danger/ (MLN trains*km)
Average of the last 5 years



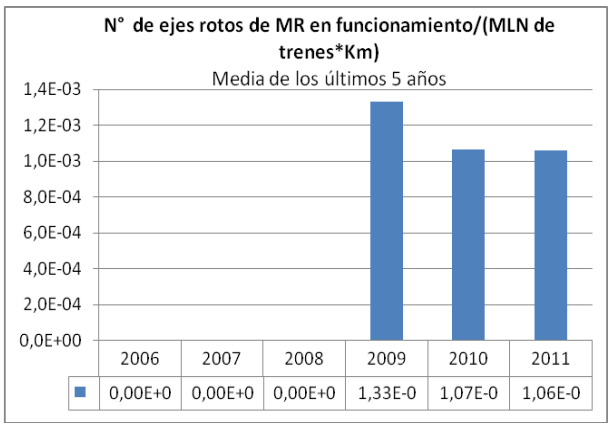
No of track buckles/ (MLN trains*km)
Average of the last 5 years



No of broken wheels on RS in operation/ (MLN trains*km)
Average of the last 5 years



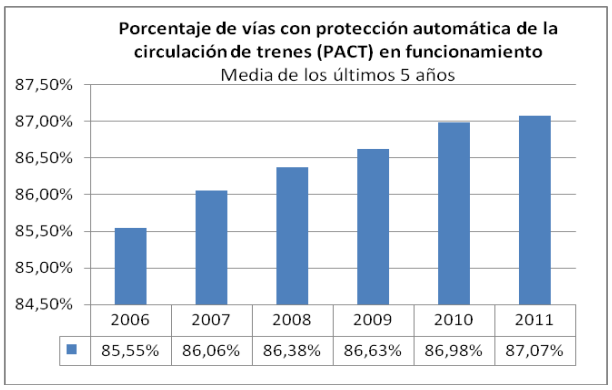
No of signalling failures/ (MLN trains*km)
Average of the last 5 years



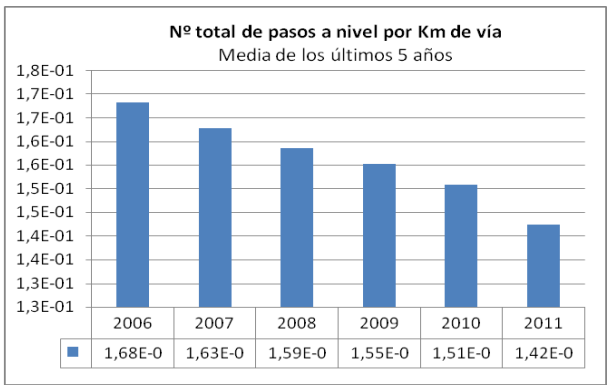
No of broken axles on RS in operation/ (MLN trains*km)
Average of the last 5 years

2012 report: values related to the average for 2007, 2008, 2009, 2010 and 2011.

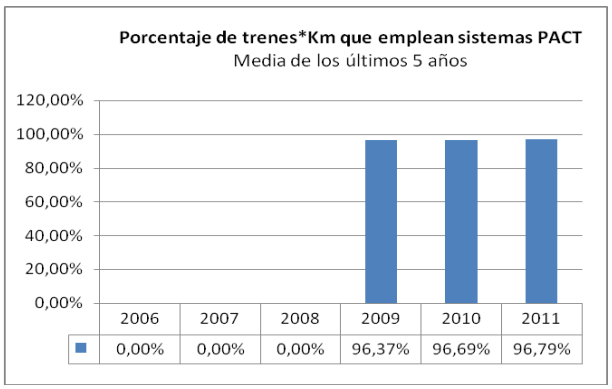
TECHNICAL SAFETY OF INFRASTRUCTURE AND ITS EXECUTION; SAFETY MANAGEMENT



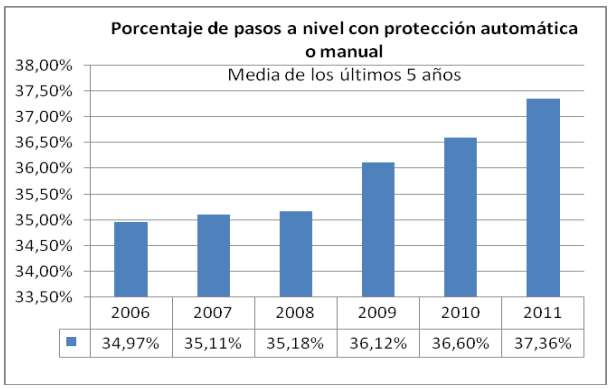
Percentage of tracks with Automatic Train Protection (ATP) in operation
Average of the last 5 years



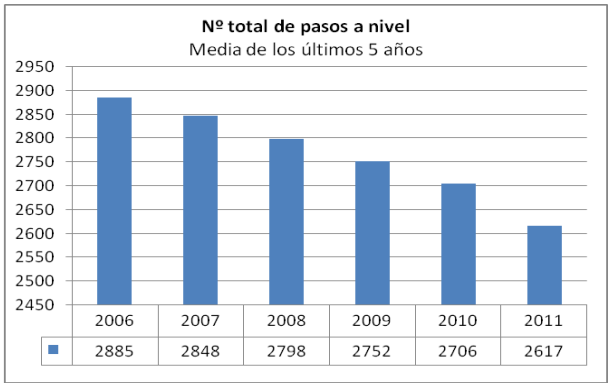
Total No of level crossings per km of track
Average of the last 5 years



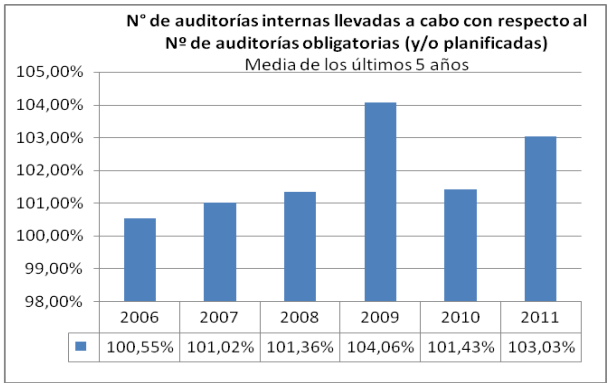
Percentage of trains*km using ATP systems
Average of the last 5 years



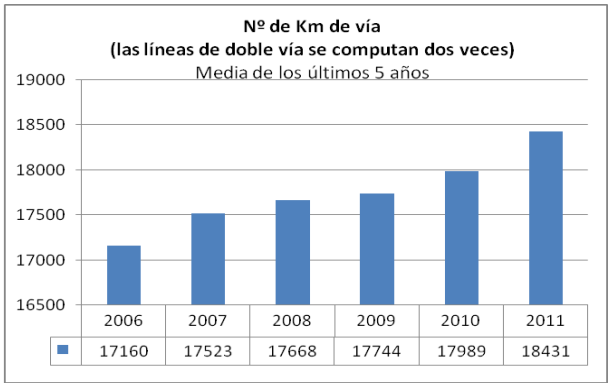
Percentage of level crossings with automatic or manual protection
Average of the last 5 years



Total No of level crossings
Average of the last 5 years



No of internal audits conducted out of the No of audits required (and/or planned)
Average of the last 5 years



No of km of track
(double track lines are counted twice)
Average of the last 5 years

2012 report: values related to the average for 2007, 2008, 2009, 2010 and 2011.

C.2. DEFINITIONS USED IN THE ANNUAL REPORT

For the period covered by this report, i.e. 2011, the indicators will be reported trying to follow, as far as possible, the definitions set out in Directive 2009/149/EC, approving the amended New Annex I to the Safety Directive 2004/49/EC, regarding Common Safety Indicators and common methods of calculating accident costs.

C.2.1. NATIONAL DEFINITIONS

There follows a series of comments on the Common Safety Indicator data provided:

- Only **significant accidents**, as defined in Directive 2009/149/EC, occurring on the General Interest Rail Network (RFIG) run by the Railway Infrastructure Manager (ADIF) have been included, since the accident rate on the network run by TP Ferro was zero in 2011.

- The '**Other persons**' category, as defined in Regulation No 91/2003, has been broken down into the following groups:
  - Level-crossing users
  - Unauthorised persons
  - Other persons

C.3. ABBREVIATIONS

ICS common safety indicator [CSI]

ERA European Railway Agency

PN Level crossing [LC]

MLN 10^6

BLN	10^9
ANS	National Safety Authority [NSA]
DGF	Department of Railways
CIAF	Rail Accident Investigation Commission
EF	Railway Undertaking [RU]
AI	Infrastructure Manager [IM]
NNS	National safety rules
RFIG	General Interest Railway Network
SGS	Safety Management System [SMS]
SW	Software

ANNEX D: Significant changes in legislation and regulations

	Legal reference	Date of entry into force of the provision	Reason for adoption (state whether it is a new provision or an amendment of an existing provision)	Description
General national rail safety legislation	-	-	-	-
Legislation on the national safety authority	-	-	-	-
Legislation on notified bodies, assessors, registration, examination bodies, etc.	Resolution of 6 June 2011	05/07/2011	Amendment to the Resolution of 15 October 2007	Establishment of basic training itineraries and the minimum study workload of training programmes for rail staff qualifications to be given at approved railway staff training centres.
National rail safety regulations	Royal Decree 641/2011 of 9 May	20/05/2011	Transposition of Directive 2008/110 into Spanish law	Amendment to Royal Decree 810/2007 of 22 June
Regulations on national safety targets and methods	-	-	-	-
Regulations on the requirements applicable to Safety Management Systems and to the safety certification of railway undertakings	-	-	-	-
Regulations on the requirements applicable to Safety Management Systems and to safety authorisation of infrastructure managers	-	-	-	-
Regulations on the requirements applicable to wagon keepers	-	-	-	-
Rules regarding the requirements applicable to Entities in Charge of Maintenance	-	-	-	-

	Legal reference	Date of entry into force of the provision	Reason for adoption (state whether it is a new provision or an amendment of an existing provision)	Description
Regulations on the requirements applicable to maintenance workshops	-	-	-	-
National safety rules for Rail Undertakings[12] and safety standards for other rail actors	-	-	-	-
Regulations concerning requirements for the authorisation of placing in service and maintenance of new and substantially altered rolling stock, including rules for exchange of rolling stock between railway undertakings, registration systems and requirements on testing procedures.	Circular Resolution 1/2011	26/02/2011	Completely replaces Resolution 10/2008 of 10 December 2008	Procedure for validating modified rail vehicles, according to the provisions in order FOM/233/2006 of 31 January on rolling stock
	Order FOM/3218/2011 of 7 November	26/11/2011	Transposition of Commission Directive 2011/18/EU of 1 March 2011	Amendment to Annexes II, V and VI to Royal Decree 1434/2010 of 5 November on the interoperability of the rail system within the Community
Common operating regulations of the railway network, including those relating to signalling and traffic procedures.	-	-	-	-
Regulations on the requirements applicable to any internal operating rules (company rules) that must be adopted by infrastructure managers and railway undertakings.	-	-	-	-
Regulations on the requirements applicable to staff carrying out safety-critical tasks, including selection criteria, medical fitness and vocational training and certification.	-	-	-	-
Regulations relating to the investigation of accidents and incidents, including the making of recommendations.	-	-	-	-

[12] If there are rules for Infrastructure Managers similar to the National Safety Rules for Railway Undertakings (National Safety Rules of Annex II to the Safety Directive: type 1, types 4-7) these must be reported. Information on operating rules, staff requirements and accident investigation should include information on national standards for the transport of dangerous goods.

	Legal reference	Date of entry into force of the provision	Reason for adoption (state whether it is a new provision or an amendment of an existing provision)	Description
Regulations on the requirements applicable to national safety indicators, including those relating to the method of gathering and analysing indicators.	-	-	-	-
Regulations on the requirements applicable to authorisation for putting infrastructure into service (tracks, bridges, tunnels, power supply, automatic train protection, radio, signalling, interlocking, level crossings, platforms etc.).	-	-	-	-

ANNEX E: Evolution of safety certification and authorisation

E.1. Safety certificates pursuant to Directive 2004/49/EC

A. To ensure that the ERADIS information is current, please indicate the number of certificates present in ERADIS which are valid at the end of the year covered by this report. *B. Please ensure that the information provided in this table is consistent with the information provided in section 'G. Supervision of RUs and IMs'.*	**Total number of certificates**	**Number of Part A certificates in ERADIS**
E.1.1. Number of Part A safety certificates issued in the year covered by this report and previous years that remain valid at the end of 2011	10	8[13]

C. To ensure that the ERADIS information is current, please indicate the number of certificates present in ERADIS which are valid at the end of the year covered by this report. *D. Please ensure that the information provided in this table is consistent with the information provided in section 'G. Supervision of RUs and IMs'.*		**Total number of certificates**	**Number of Part B certificates in ERADIS**
E.1.2. Number of Part B safety certificates issued by your Member State in the year covered by this report and previous years that remain valid in 2011	Number of Part B certificates whose Part A has been issued in your Member State	10	8[12]
	Number of Part B certificates whose Part A has been issued in another Member State	1	1

Please provide information on Part A certificate applications received in the year covered by this report for new certificates or existing certificates that need to be renewed or updated / amended.		**A**	**R**	**P**
E.1.3. Number of new applications for Part A Certificates made by railway undertakings in 2011	new certificates			
	updated / amended certificates			
	renewed certificates			

[13] In late November 2011, the Spanish NSA received two extension applications for renewal of safety certificates for Acciona Rail Services and Continental Rail, which have not been reported to ERADIS.

Please provide information on Part B certificate applications received in the year covered by this report for new certificates or existing certificates that need to be renewed or updated / amended.			A	R	P
E.1.4. Number of new applications for Part B Certificates made by railway undertakings in 2011	whose Part A has been issued in your Member State	new certificates			
		updated / amended certificates			
		renewed certificates			
	whose Part A has been issued in another Member State	new certificates			
		updated / amended certificates			
		renewed certificates			

A = Application approved, certificate already issued
R = Application rejected, no certificate issued
P = Case pending, no certificate issued to date

To ensure that the ERADIS information is current, please indicate the number of certificates in ERADIS which were revoked at the end of the year covered by this report.	**Total number of certificates revoked in 2011**	**Number of revoked certificates in ERADIS (which were revoked in 2011)**
E.1.5. Number of Part A certificates revoked in the year covered by this report	0	0
E.1.6. Number of Part B certificates revoked in the year covered by this report	0	0

E.1.7. List of countries where the railway undertaking applicants for a Part B safety certificate in your Member State have already obtained their Part A safety certificate

Name of the RU	Member State where the Part A Safety Certificate was issued
Société Nationale des Chemins de Fer Français (SNCF)	France (Part A certificate number: FR1120090021)

E.2. Safety authorisations pursuant to Directive 2004/49/EC

Please ensure that the information provided in this table is consistent with the information provided in section 'G. Supervision of RUs and IMs'.	**Total number of safety authorisations**
E.2.1. Number of safety authorisations issued to infrastructure managers in the year covered by this report and previous years that remain valid at the end of 2011	2

Please provide information on Safety Authorisation applications received in the year covered by this report for new authorisations or existing authorisations that need to be renewed or updated / amended.		**A**	**R**	**P**
E.2.2. Number of applications for safety authorisations submitted by infrastructure managers in 2011	new authorisations			
	updated / amended authorisations			
	renewed authorisations			

A = Application accepted, authorisation already issued
R = Application rejected, no authorisation issued
P = The case is pending, no authorisation issued to date

E.2.3. Number of Safety Authorisations revoked in the year covered by this report	0

E.3. Procedural aspects – Part A Safety Certificates

	New	**Updated / modified**	**Renewed**
Average time, from receipt of the application with all the necessary information to the final issue of a Part A safety certificate to railway undertakings in 2011	4 months	-	1 month

E.4. Procedural aspects – Part B Safety Certificates

		New	Updated / modified	Renewed
Average time, from receipt of the application with all the necessary information to the final issue of a <u>Part B</u> safety certificate to railway undertakings in 2011	whose Part A has been issued in your Member State	4 months	1 month	1 month
	whose Part A has been issued in another Member State	-	-	-

E.5. Procedural aspects – Safety authorisations

		Updated / modified	Renewed
Average time from receipt of the application with all necessary information to the final issue of a safety authorisation to infrastructure managers in 2011	-	-	-