



PKP PLK climate change adaptation strategy

Athens, 18th November 2019

PKP Polish Railway Lines (PKP PLK) general information

PKP Polish Railway Lines – the national railway infrastructure manager
a company with majority stock held by the State Treasury

Creating the best conditions for providing transportation services for the country by:

- ensuring proper level of safety,
- respecting the natural environment,
- providing access to railway lines to passenger and freight railway undertakings,
- ensuring a high standard of information on passenger trains traffic,
- acting to increase accessibility, attractiveness and reliability of railway transport.

PKP PLK in figures

18 536 km of railway lines

38 815 turnouts

14 173 level crossings

25 152 engineering structures

5 764 buildings of technical posts

14 487 structures (umbrella roofs, platforms, acoustic screens)

Polish National Strategy for Adaptation to Climate Change with the perspective by 2030

Strategy for the Responsible Development to 2020 with the perspective by 2030

Plan for Railway Infrastructure Adaptation to Climate Change – document of PKP PLK

Plan for Railway Infrastructure Adaptation to Climate Change

- Indicates which PKP PLK operational areas are vulnerable to climate change;
- Develops methods for assessment of climate change impact on PKP PLK performance;
- Indicates the set of actions which should be undertaken.



Climate factors

- Storms, lightnings, hailstorms,
- Rainfall – extreme flows, floods (from the river/sea, sudden, urban floods), landslides,
- High temperature (fire),
- Strong and very strong wind,
- Low temperature (incl. black ice), snowfall,
- Fog.



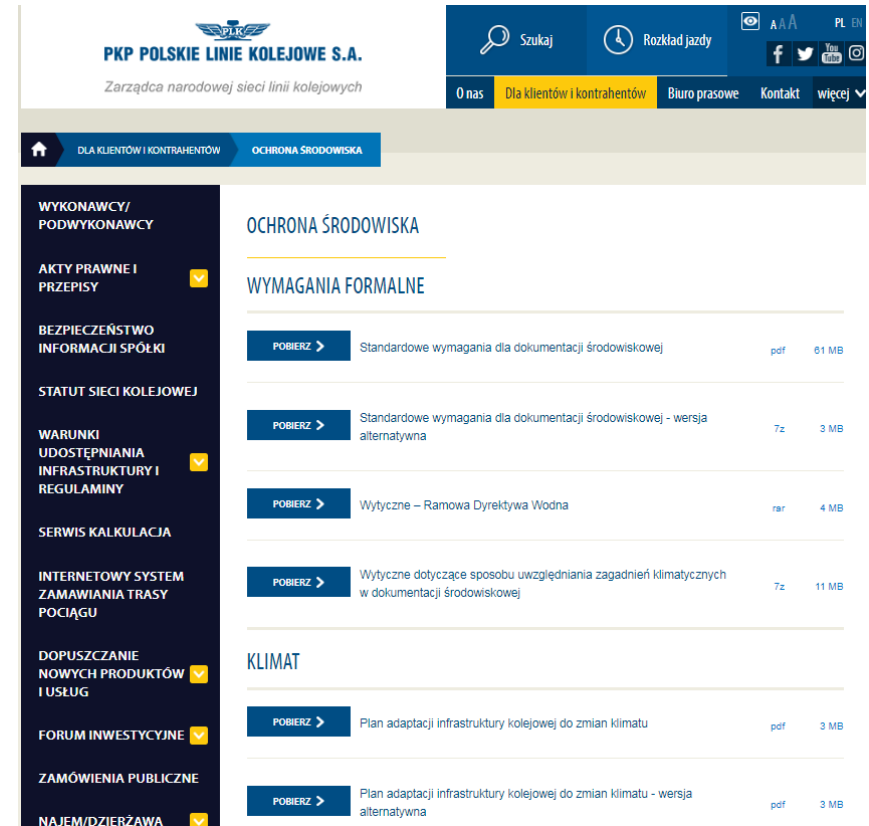
source: historia.trojmiasto.pl

Elements of the rail system vulnerable to climate factors

Fields of operation	Elements of the rail system
Railway lines	Tracks
	Drainage system
	Engineering structures
Engineering and telecommunications	Railway traffic control devices
	Telecommunications engineering
Power supply	Electric power engineering
	Catenary
Buildings and structures	Installations
	Building structures
	Roads
	Environmental protection devices
Traffic management	Rolling stock
	Railway station buildings

Guidelines on how the climate issues should be addressed in the environmental documentation

- reports on environmental impact
- project information sheets



The screenshot displays the PKP website's 'OCHRONA ŚRODOWISKA' (Environmental Protection) section. The page features a dark sidebar with navigation links and a main content area with a list of documents. The documents are categorized under 'WYMAGANIA FORMALNE' (Formal Requirements) and 'KLIMAT' (Climate). Each document entry includes a 'POBIERZ' (Download) button, a title, a file type icon, and a file size.

Category	Document Title	File Type	File Size
WYMAGANIA FORMALNE	Standardowe wymagania dla dokumentacji środowiskowej	pdf	81 MB
	Standardowe wymagania dla dokumentacji środowiskowej - wersja alternatywna	7z	3 MB
	Wytyczne – Ramowa Dyrektywa Wodna	rar	4 MB
	Wytyczne dotyczące sposobu uwzględniania zagadnień klimatycznych w dokumentacji środowiskowej	7z	11 MB
KLIMAT	Plan adaptacji infrastruktury kolejowej do zmian klimatu	pdf	3 MB
	Plan adaptacji infrastruktury kolejowej do zmian klimatu - wersja alternatywna	pdf	3 MB

Development of the SEPE system

SEPE - Operating Performance Registration System

Features to be added to SEPE:

- the cause of an incident;
- the reaction time of the teams minimising the consequences of the incident;
- the time needed to restore train traffic;
- the number of teams involved;
- the equipment necessary to repair any damage.

Tree inventory

recognition of trees within a distance of 25 metres of the railway tracks

results presented in GIS



source: imgw.pl

Systematic removal of trees that directly threaten railway infrastructure

based on the inventory

avoid possible effects of fallen trees



source: radio90.pl

Replacement of the heating systems of buildings

low-emission heating devices



source: plk-sa.pl

Recommended actions

Research project - increasing energy efficiency of devices for electric heating of the turnouts

reduced consumption of electricity

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reduced CO₂ emission

Recommended actions

Updating the Plan for Railway Infrastructure Adaptation to Climate Change every 5 years

assessment of vulnerability

implementation of changes

proposal for new actions

Advantages:

- providing acoustic comfort
- generating solar energy

Cooperation with the National Centre for Research and Development



PKP POLSKIE LINIE KOLEJOWE S.A.

Zarządca narodowej sieci linii kolejowych

Thank you for your attention