



CONFERENCIA INTERNACIONAL
SOBRE
VIALIDAD INVERNAL

Del 27 al 30 de junio de 2017

Mendoza - Argentina

WINTER MAINTENANCE IN POLAND IN ASPECT OF ROAD USERS NEEDS

Paweł Sobiesiak

www.vialidadinvernal.org.ar

ORGANIZAN



VIALIDAD
NACIONAL



Asociación Argentina
de Carreteras



KEY QUESTIONS

QUESTION Nº 1

What winter services are designed for?

Answer:

For ensuring passability and safety in winter on the road.

QUESTION Nº 2

Whom winter services serve to?

Answer:

- ✓ to people (road users),
- ✓ to economy.



WHAT ARE ROAD USERS' NEEDS & DEMANDS?

Car and truck drivers:

- road safety;
- road roughness;
- roads passable;
- road snow clearance;
- comfortable travel.



WHAT ARE ROAD USERS' NEEDS & DEMANDS?

Cyclists:

- bicycle path safety;
- bicycle path roughness;
- bicycle path passable;

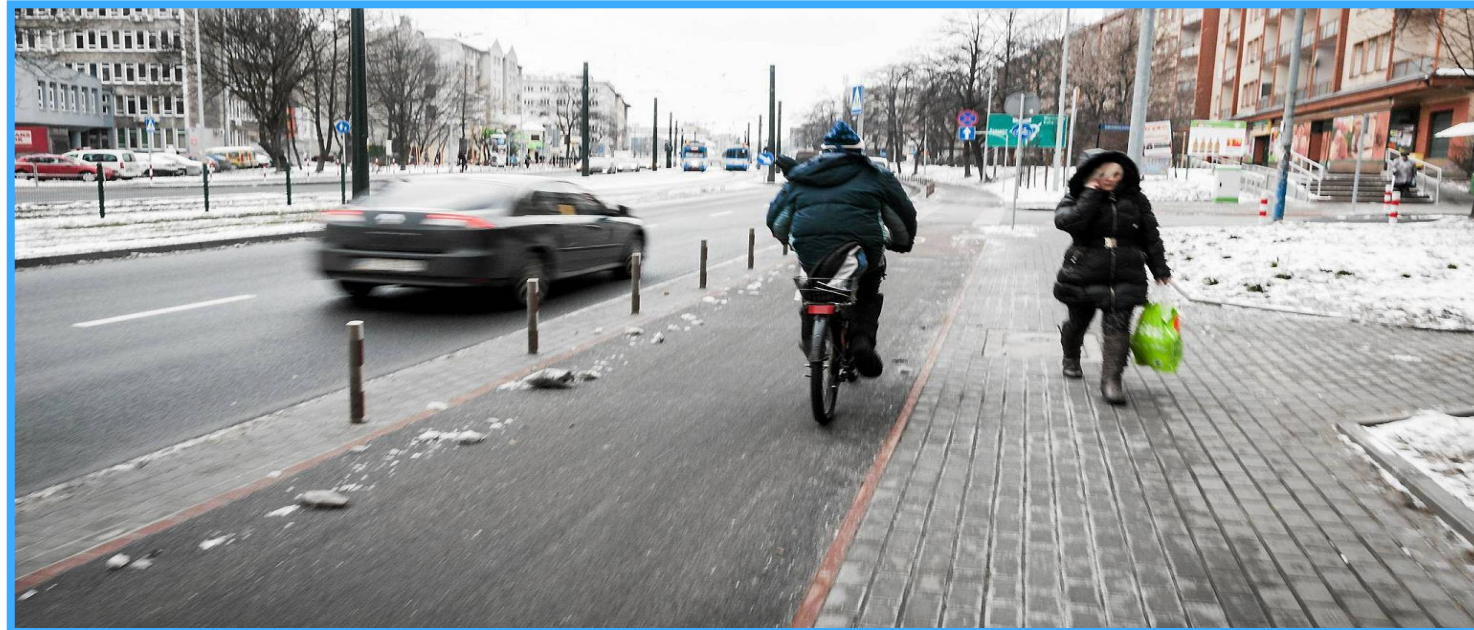


- bicycle path snow clearance;
- comfortable travel.

WHAT ARE ROAD USERS' NEEDS & DEMANDS?

Pedestrians:

- safety;
- sidewalk roughness;
- sidewalk snow clearance.



GENERAL DIRECTORATE FOR NATIONAL ROADS AND MOTORWAYS (GDDKiA)



**Generalna Dyrekcja
Dróg Krajowych i Autostrad**

General Directorate for National Roads and Motorways

was set up by Ministry of Transport in 1998 as the central administration authority for issues related to the national road system in Poland.



GENERAL DIRECTORATE FOR NATIONAL ROADS AND MOTORWAYS (GDDKiA)

General Directorate for National Roads and Motorways:

- 1 Headquarter - **Warsaw**
- 16 Provincial Branches (1 Provincial Branch equals 1 Voivodeship);



- 104 Local Divisions;



- 273 Local Subdivisions;

GDDKiA manages over 19 000 km motorways, expressways and national roads.



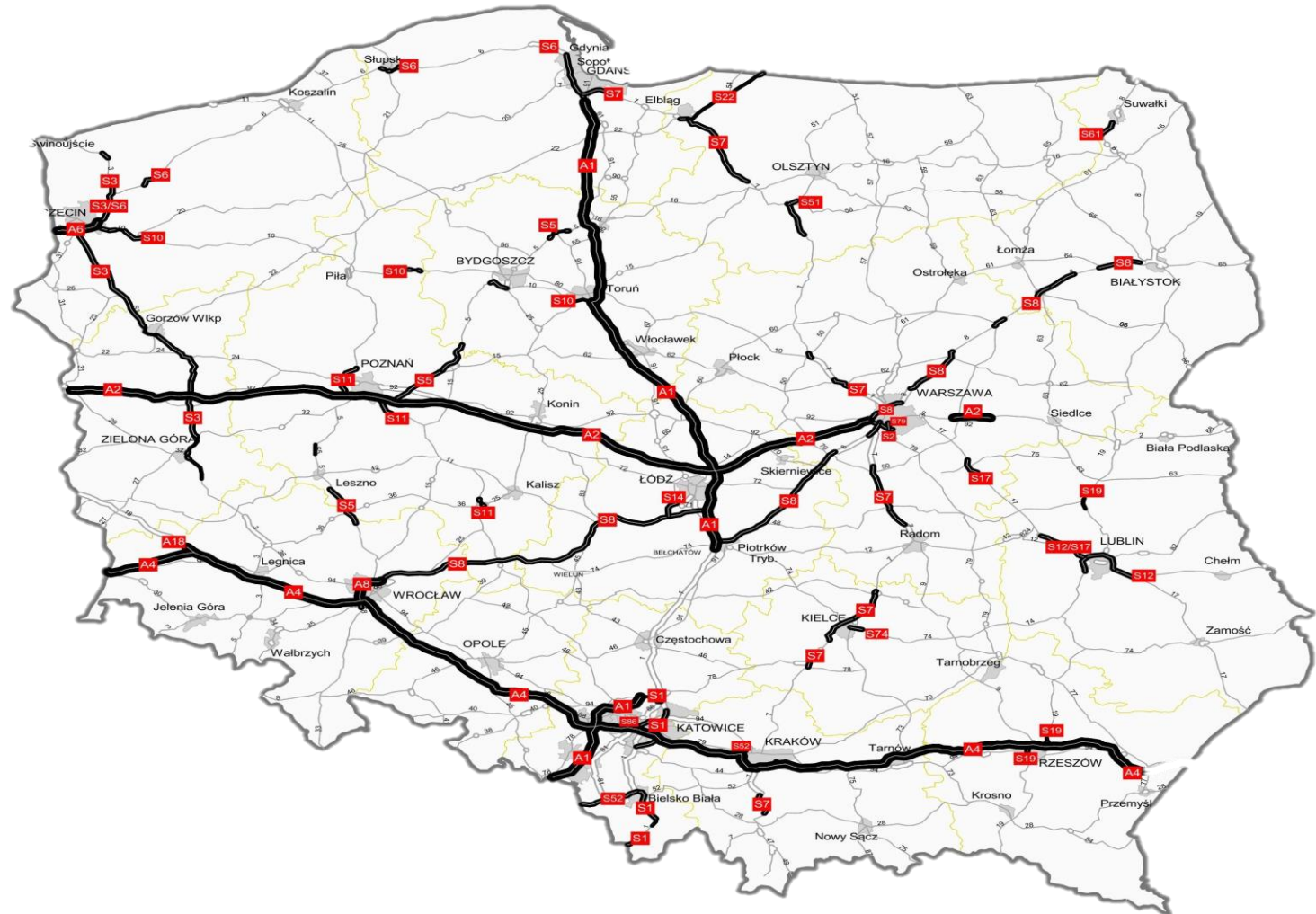
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GENERAL DIRECTORATE FOR NATIONAL ROADS AND MOTORWAYS (GDDKiA)

Road network in Poland:

- motorways (1600 km)
- expressways (1500 km)
- national roads (16000 km)

(current data for June 2017)



RESPONSE TO ROAD USERS NEEDS

GDDKiA has at its disposal:

- engineers and road service workers;
- funds;
- System of road maintenance:
 - road Maintenance
 - National Road Safety Program
 - road Network Development
 - cooperation with Road Users
 - **WINTER ROAD MAINTENANCE**

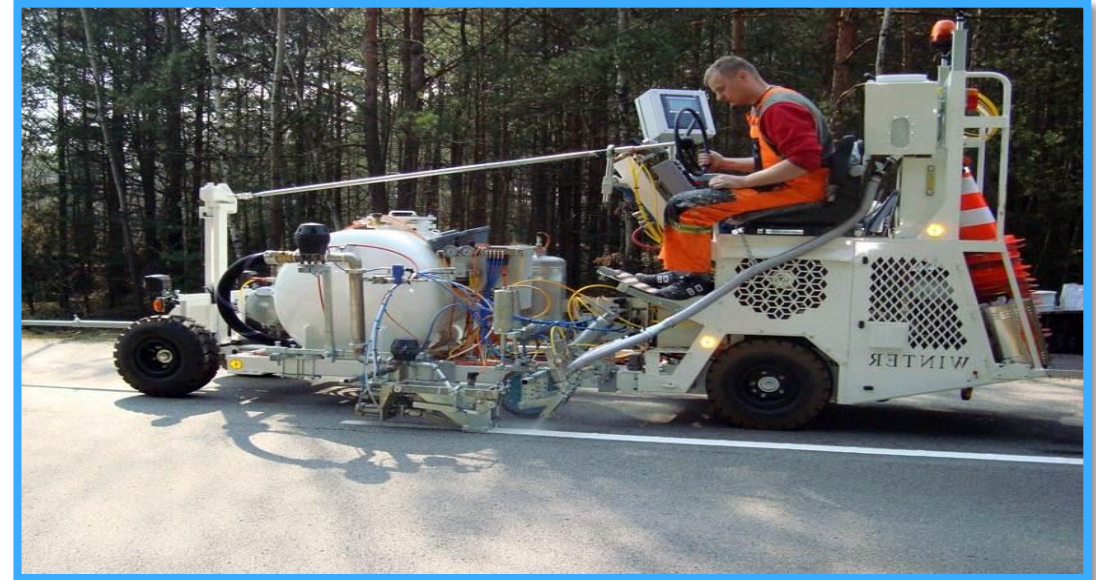




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RESPONSE TO ROAD USERS NEEDS

Road Maintenance

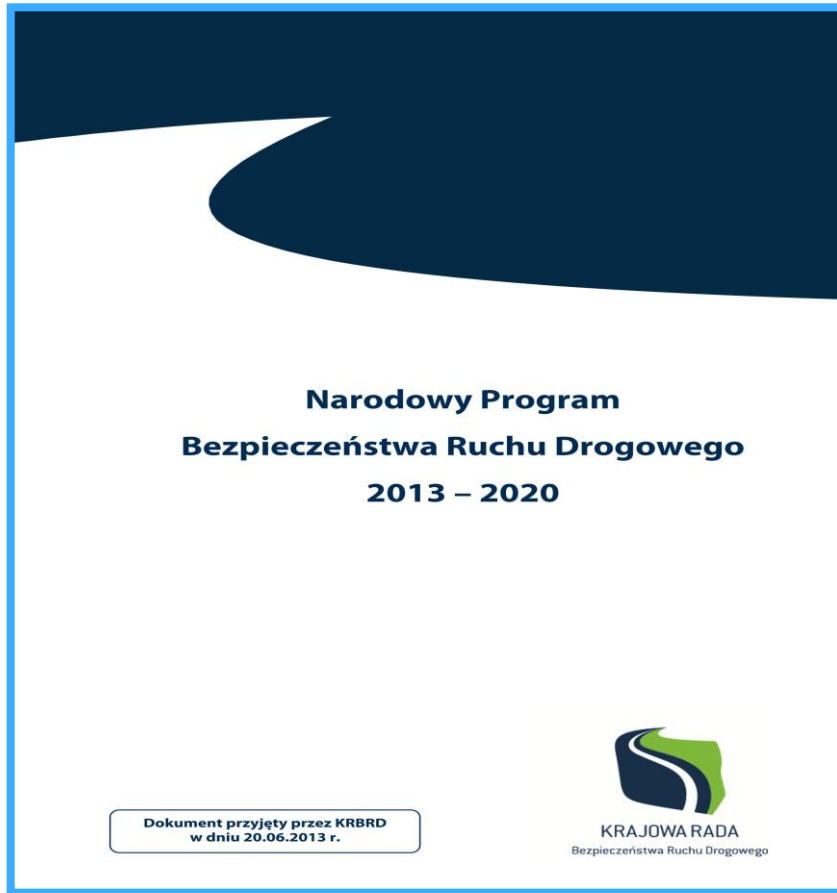




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RESPONSE TO ROAD USERS NEEDS

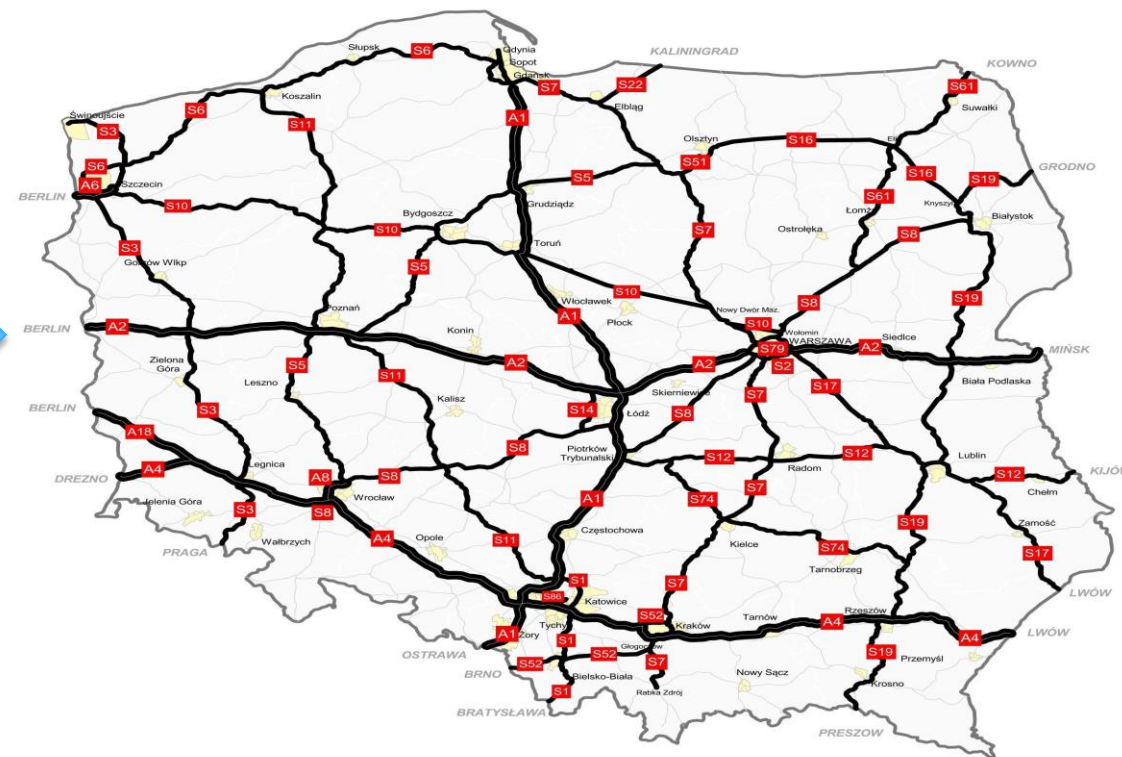
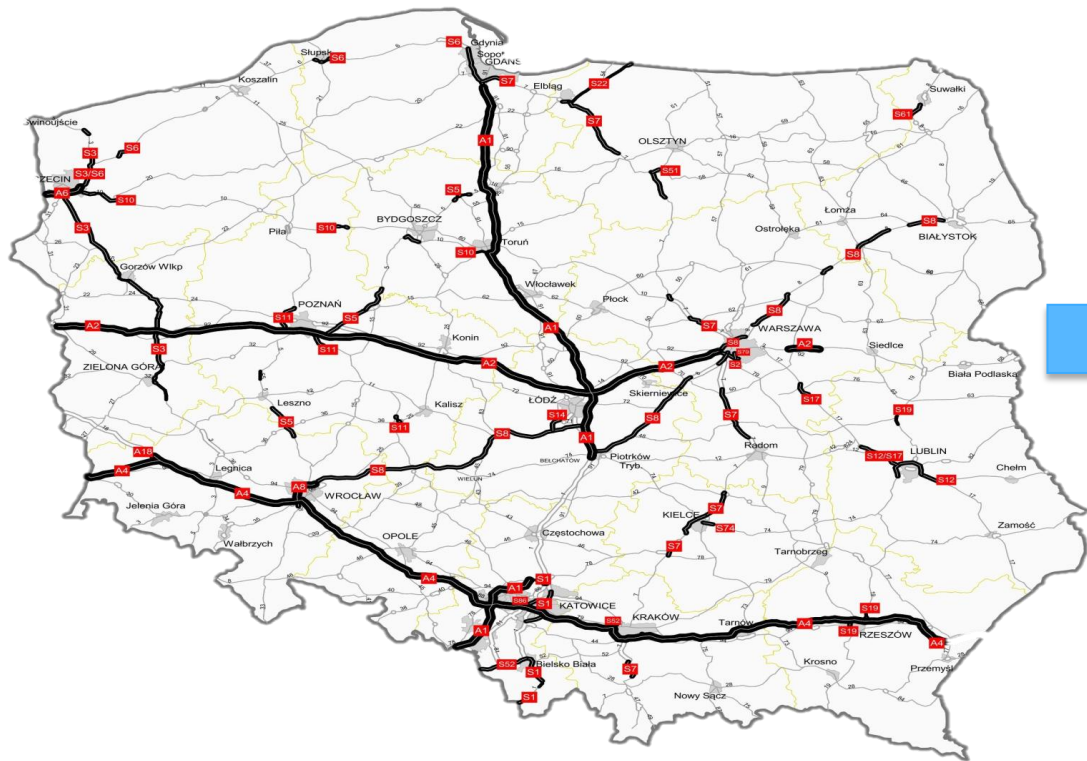
National Road Safety Program





RESPONSE TO ROAD USERS NEEDS

National Road Network Development





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EXPRESSWAY S6, Karczemki Node





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EXPRESSWAY S6, Karczemki Node



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RESPONSE TO ROAD USERS NEEDS

Cooperation with Road Users

GDDKiA INFORMACJA DROGOWA 19 111 **viaTOLL PL**

SERWIS GDDKIA ODDZIAŁY SERWIS DLA KIEROWCÓW ZAMÓWIENIA PUBLICZNE KONTAKT

MAPA STANU BUDOWY DRÓG SERWIS DLA KIEROWCÓW MAPA KAMER MONITORUJĄCYCH FORMULARZ KONTAKTOWY MAPA WARUNKÓW DROGOWYCH

Ograniczenia w ruchu
Opłaty za autostrady
Wzory wniosków, zawiadomień oraz protokołów związanych z zarządzaniem pasem drogowym dróg krajowych
Formularz kontaktowy - oznakowanie dróg krajowych
Przejazdy nienormalywne
Lista utrudnień
Czas przejazdu Kraków - Zakopane
Mapa warunków drogowych
Mapa kamer monitorujących
Mapa ograniczeń na przejściach granicznych
Mapa Stanu Budowy Dróg
Mapa istniejących i planowanych Miejsc Obsługi Podróżnych

Strona główna > Serwis dla kierowców > Mapa warunków drogowych

Serwis dla kierowców • Mapa warunków drogowych

Mapa warunków drogowych
Mapa aktualnych warunków drogowych w Polsce.

Oddziały

Widok
Nawierzchnie
 Drogi
 Zimowy stan nawierzchni

Dane
 Utrudnienia
 Pogoda
 Parkingi

Warstwy
 Lasy
 Jeziora
 Rzeki
 Kontury woj.
 Miasta
 Numery dróg

Info
Legenda

Utrudnienia
Roboty
Wypadek
Inne zdarzenie
Katastrofa

Opady
Brak
Kieles
Mżawka
Deszcz przelotny
Deszcz ciępy
Śnieg z deszczem
Śnieg
Śnieg intensywny

Wiatry
Brak
Słabe
Umiarkowane
Silne

Nawierzchnie
Warunki jazdy bez utrudnień
Utrudnione warunki jazdy
Droga zamknięta

Wersja 1.4



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RESPONSE TO ROAD USERS NEEDS

Winter Road Maintenance



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WINTER ROAD MAINTENANCE

”Winter Maintenance Guidelines” v. 2 published in 2015

1. Preparations for the winter season.
2. Preparations and storage of de-icing materials.
3. Passive road protectors
4. Snow removal
5. Prevention of formation and elimination of slipperiness
6. Control and reception of winter works



WINTER MAINTENANCE LEVELS

LEVEL	DESCRIPTION	ACTIVITIES		
1	PREPARATIONS TO WINTER SEASON	<ul style="list-style-type: none"> • preparatory and organizational activities 	<ul style="list-style-type: none"> • information handling for the Purchaser • self-monitoring for activities performed within the framework of the Winter Maintenance • ensuring monitoring of activity of the Winter Maintenance vehicles 	THROUGHOUT THE WINTER PERIOD
2	WINTER MAINTENANCE OPERATION	<ul style="list-style-type: none"> • Winter Maintenance actions 		
3	END OF WINTER SEASON	<ul style="list-style-type: none"> • activities assuring tidiness 		



WINTER MAINTENANCE STANDARDS

STANDARD	DESCRIPTION
I	Snow and winter slipperiness are removed over the entire width of the roadway. There is no layer of snow on the road.
II	Snow and winter slipperiness are removed over the entire width of the roadway.
III	Snow is removed over the entire width of the roadway and winter slipperiness is removed in: <ul style="list-style-type: none">• intersections with hardened public roads;• intersections with railways;• roadway sections with >4% tilt;• bus stops;• other places set by the road administration.
IV	Snow is removed over the entire width of the roadway and sprinkled on the sections that determine the traffic possibilities set by the road administration.
V	Snow is removed from the roadway (at least one traffic lane) and sprinkled on the sections that determine the traffic possibilities set by the road administration.

WINTER MAINTENANCE ALERTS

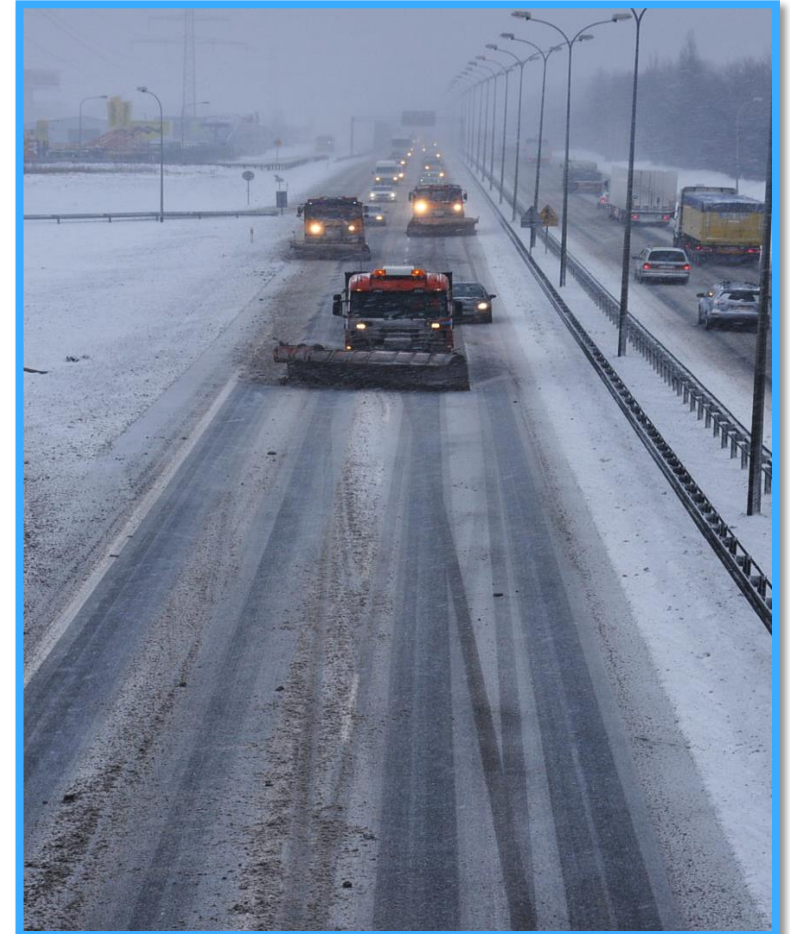
ALERT TYPE	DESCRIPTION	ACTIVITY
WHITE ALERT	READYNESS STAGE	<ul style="list-style-type: none"> • Keeping a constant monitoring of the weather; • Routine Winter Maintenance duty on a 24-hour system 7-days a week in all Local Subdivisions; • Maintain the preparedness of the vehicles.
YELLOW ALERT	PROPHYLACTIC STAGE	<ul style="list-style-type: none"> • Prophylactic activities (using de-icing materials);
ORANGE ALERT	PROPER ACTIONS STAGE	<ul style="list-style-type: none"> • Winter Maintenance activities provided by the entire amount of available vehicles (snow ploughs and salt spreaders).
RED ALERT	CRITICAL ACTIONS STAGE	<ul style="list-style-type: none"> • Winter Maintenance activities; • Usage of hard vehicles is permitted; • Cooperation with local authorities & services (Police, Fire brigades etc.)

WINTER ROAD MAINTENANCE

The entire national road network for the 2016/2017 season was maintained in the winter in the following standards:

- I STANDARD – about 4.8 thousand km;
- II STANDARD – about 11.3 thousand km
- III STANDARD – about 1.8 thousand km
- **IV STANDARD – 0.0 km**
- V STANDARD – about 1.1 thousand km

- Number of vehicles used for Winter Road Maintenance: about 2500 vehicles;
- Number of warehouses: about 260 warehouses with a total capacity of almost 400 thousand Tons of road salt;
- Number of employees responsible for Winter Road Maintenance: about 3000 people





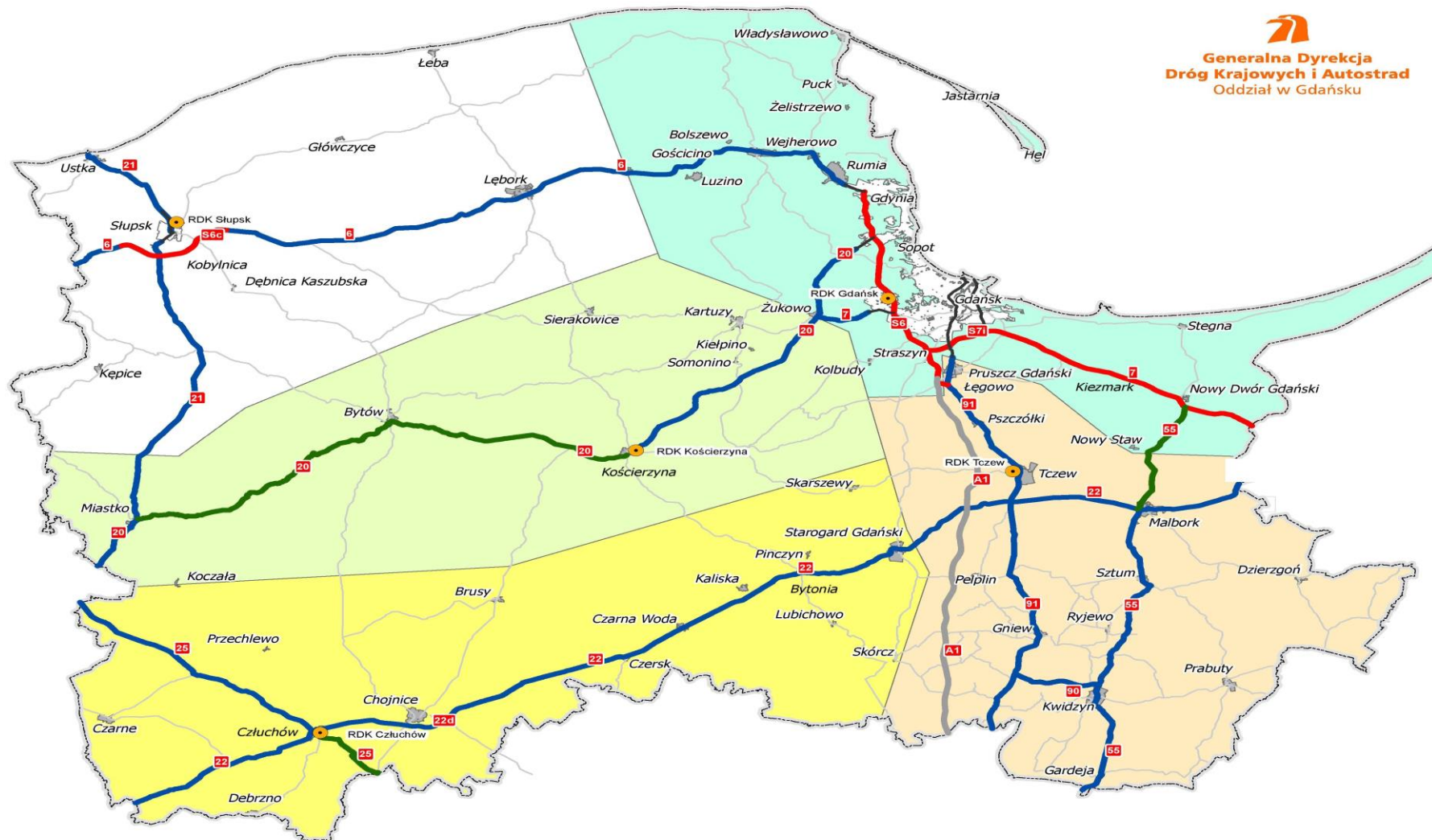
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WINTER MAINTENANCE STANDARDS POMERANIAN VOIVODESHIP


Generalna Dyrekcja
Dróg Krajowych i Autostrad
Oddział w Gdańsku



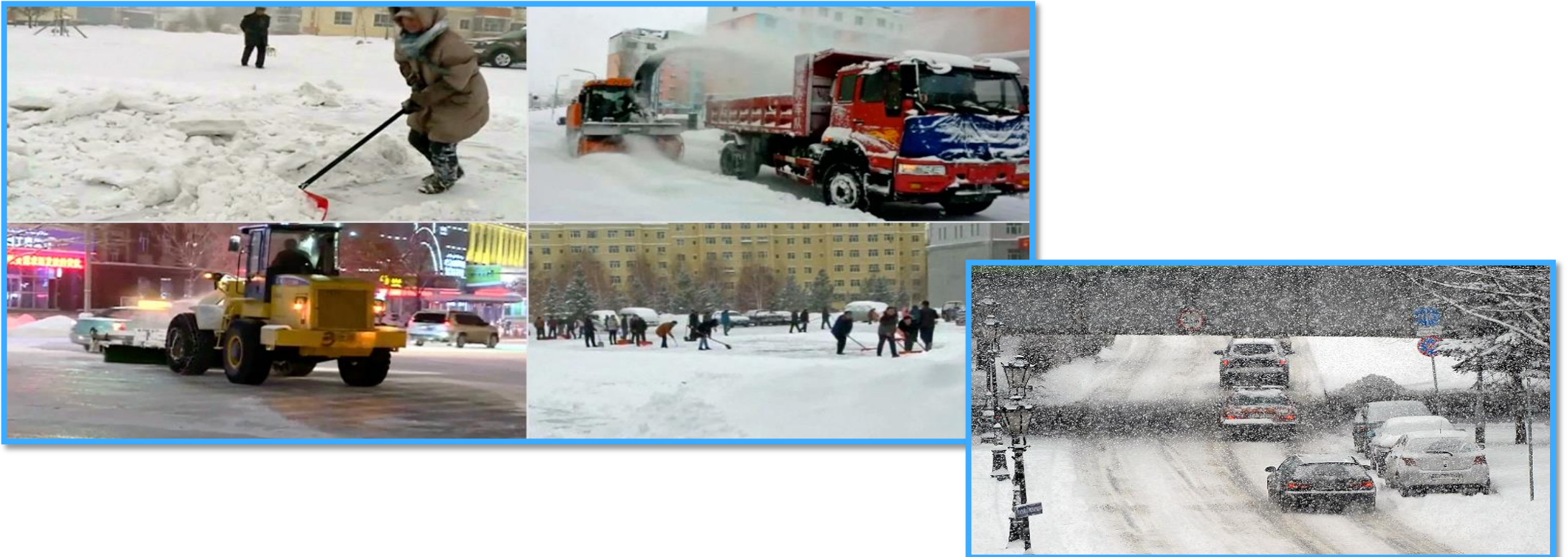
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WINTER ROAD MAINTENANCE

**Snow fall has surprised the roads services
AGAIN !**





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WINTER ROAD MAINTENANCE

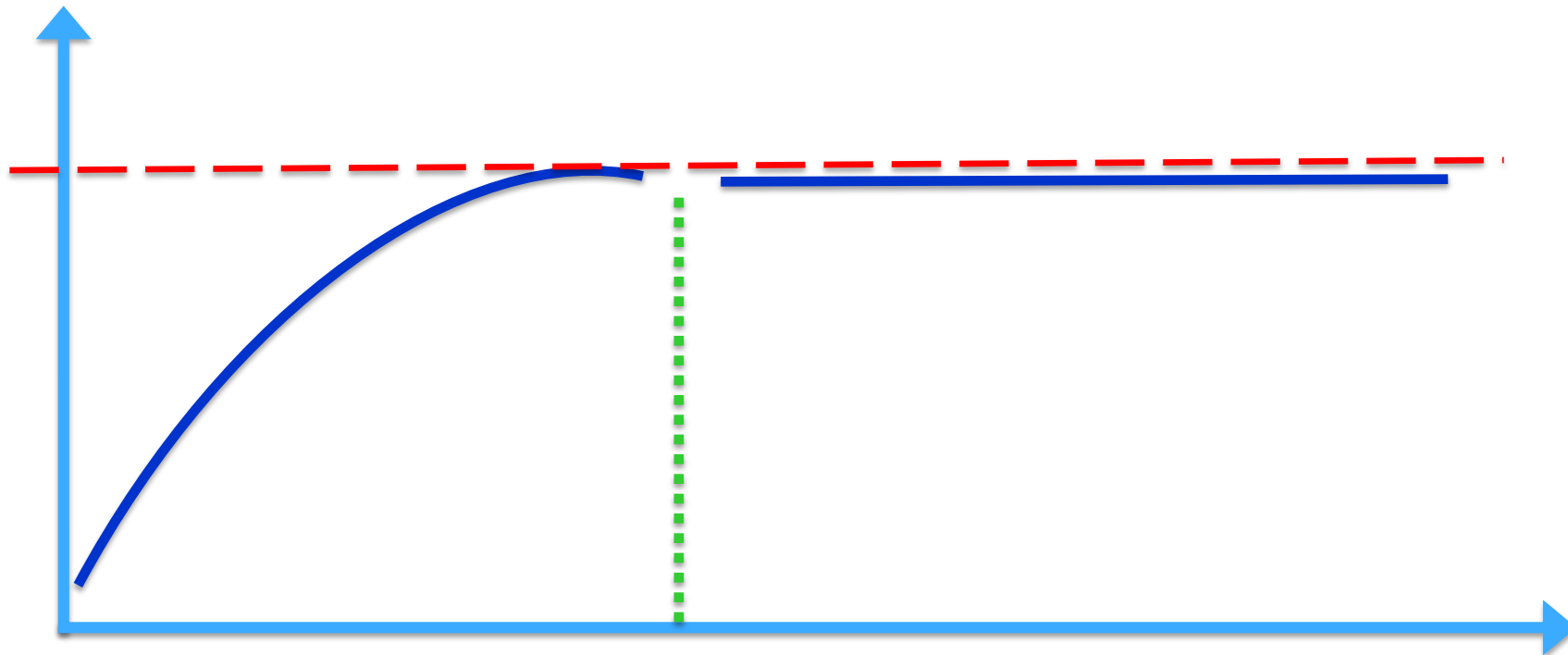


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COSTS vs. EFFECTIVENESS

EFFECTIVENESS
[😊]



optimal
costs

COSTS
[\$]



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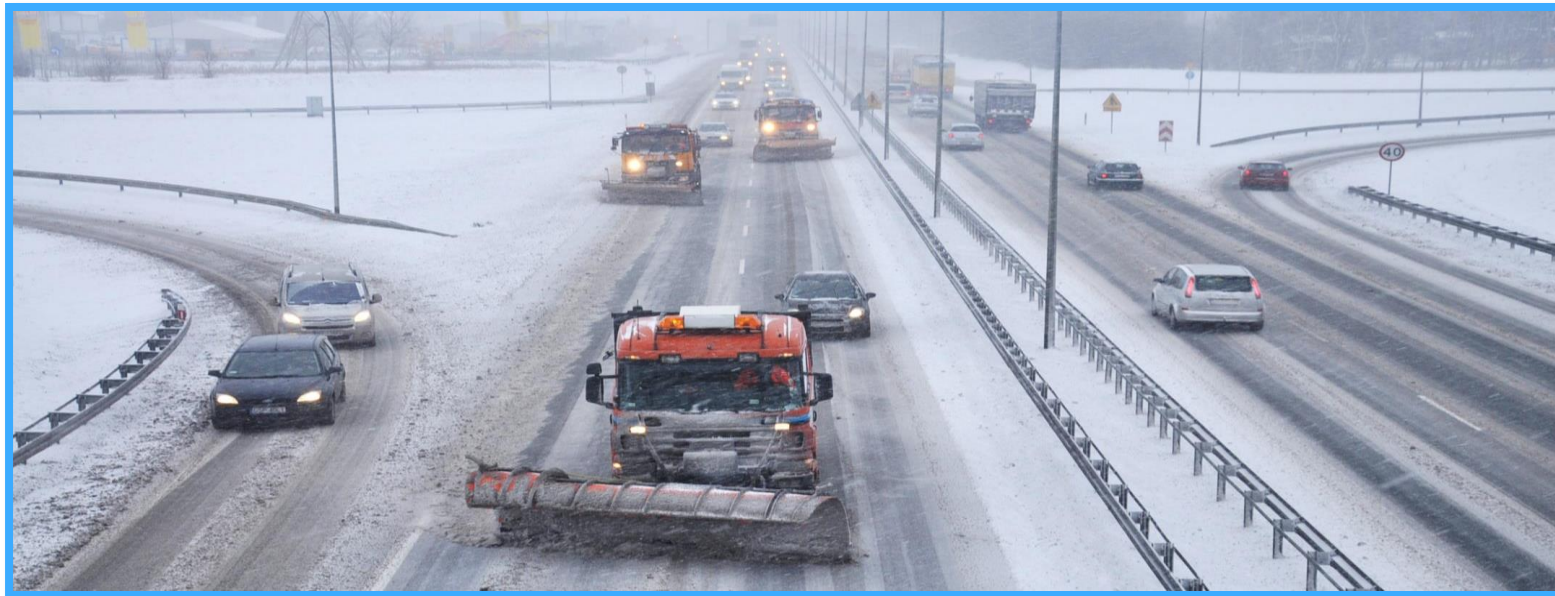
TRICITY BAYPASSES Expressway S6 & S7i



PROBLEMS AND ITS SOLVING

The main task of people dealing with issues on Winter Road Maintenance is to **ensure passability**.

The vehicles are wide, some occupy the entire lane, move slowly, at a speed of about 40-50 km/h. Behind them, however, they leave a safer road. That is why we appeal for the passing of such vehicles.





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INFORMATION FOR ROAD USERS



Road information
telephone number

19 111



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INFORMATION FOR ROAD USERS



**Road
Information
Point**
1 per Voivodeship
(Province)



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DECISIONS SUPPORT SYSTEMS IN POLAND

Road Information Point (Headquarter in Warsaw)



SUMMARY

WINTER MAINTENANCE IN POLAND IN ASPECT OF ROAD USERS NEEDS

- Identification of road users' needs & demands;
- set up an adequate system and regulations;
- prepare skilled and educated staff;
- operation bases and equipment;
- providing optimal winter maintenance services;
- constant monitoring weather conditions
- control over the Maintenance Contractor;
- **cooperating with mass-media and road users.**





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THANK YOU FOR YOUR ATTENTION



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