

## PIARC (World Road Association) Strategic Plan - 2024-2027

### TECHNICAL COMMITTEE 3.2 – WINTER SERVICE

#### Overview

Slippery roads due to snow or ice accidents that are more frequent and heavy snowfalls might even cut the road connection of whole valleys from the outside. Thus, winter service plays a major role for traffic safety during the cold period of the year. To provide valuable information for road authorities TC 3.2 is working on several Issues with the Winter Congress being the most important one. To share information worldwide the Snow and Ice Databook is going to be updated. One might think spreading salt and ploughing snow is a rather simple task the methods and equipment is under ongoing development to achieve better results. Using different modes of transport in urban areas has its own requirements on winter service. A new issue deals with the lack of skill and resources for winter service, TC 3.2 will have a look at that.

#### 3.2.1 Skill and resources for winter service

**Purpose:** The purpose of this work is to find solutions on how to deal with shortage of skilled winter service personal. Winter weather has no regular working hours and is not predictable for longer periods.

**Importance to roads agencies:** This work is important to road agencies/road industry because they need skilled workforce that can deal with weather events at any time and provide safe roads.

**Audience:** Decision makers might be interested to find solutions to this problem others might have already found.

**Deliverables:** Case studies, briefing note,

**Background to TC's work on this topic:** This is a relatively new problem for this TC and no work has been done before on that issue.

**Low and lower-middle income countries:** -

**Gender inclusion & diversity:**

**Potential duration:** This will be part in the second half of the cycle.

#### 3.2.2 Integration of new technologies in winter services

**Purpose:** The purpose of this work is to gather information about the newest technologies and strategies used in winter service. Also, research projects could find a place in the report. The collection of different approaches makes it much easier to see how one can improve the own winter service.

**Preliminary research questions:** General description of state of the art of the existing technologies and new technologies for winter service. Expected technology to be used in winter service in the future. Make a projection on what could be automated or connected equipment for winter service in the future.

**Importance to roads agencies:** Based in a deep research on worldwide use of new technologies on winter service, the report could give some examples of tests or studies to these topics. Based on the experience of the past cycles many countries often have very extensive research projects and practical experience in a very specific field of winter service. The knowledge exchange provided with this item helps other countries to adopt successful projects much quicker.

**Audience:** This work is mainly for operational winter service personal and decision makers.

**Deliverables:** Technical report, survey.

**Background to TC's work on this topic:** These kinds of reports have already been done by the TC. The impact was that methods like pre-wetted salt and brine or strategies like preventive spreading are now success stories all over the world.

**Low and lower-middle income countries:** Some technologies, such as the use of brine, are better and cheaper to use if one knows how to use them correctly. Extensive and expensive research has already been done, the outcome is part of the report.

**Gender inclusion & diversity:** As a very technical report with focus on mechanical or chemical topics it is not likely to relate to gender and diversity aspects. If there such aspects appear the report they will be highlighted.

**Potential duration:** It will take the whole cycle to finish the final report. A draft or preview will be shown at the Winter Congress 2026.

### 3.2.3 Update of the Snow and Ice Data Book

**Purpose:** The purpose of this work is to update the Snow and Ice Data Book 2022 with the case studies and main findings. To establish the Snow and Ice Data Book (SIDB) as a current resource of winter service in different countries for knowledge transfer globally. To develop an online version of SIDB (manual or similar).

**Importance to roads agencies:** This work is important to road agencies/road industry because the Snow and Ice Databook (SIDB) as a PIARC product contains general information about winter maintenance from many different countries which makes it a very good resource for comparisons or finding of new ideas. Therefore, it should be established as a current resource for knowledge transfer globally and been updated.

**Audience:** Experts, decision makers who want to see how other countries deal with winter service in comparable or maybe even wors climate conditions.

**Deliverables:** Snow and Ice Databook.

**Background to TC's work on this topic:** The Snow and Ice Databook is a regular issue in every cycle. Due to the long update cycles with asking for all countries for material, and then assembly it to a report, publish as a pdf on the website takes time.

Therefore, the possibility to update the SIDB from pdf to an online version, which could be updated more easily, should be developed and introduced during the period. This also means the inclusion of an interactive format to facilitate use by members of PIARC.

**Low and lower-middle income countries:** The Snow and Ice Databook delivers many use cases from around the world. It might help to find efficient solutions without development and research.

**Gender inclusion & diversity:** -

**Potential duration:** English version should be finished with the Winter Congress 2026.

### 3.2.4 Preparation of the 2026 International Winter Congress

**Purpose:** The purpose of this work is to prepare several (around half) of the Technical Session at the next Winter Congress 2026. In addition, it would be appreciated to collaborate in Foresight Session and/or Workshops, as well as contribute to the Proceedings.

**Importance to roads agencies:** This work is important to road agencies/road industry because the 2026 International Congress will gather winter service experts from all over the world. Its objective will be share knowledge and exchange ideas on the latest development and challenges that winter road services are facing.

**Audience:** Congress participants.

**Deliverables:** Sessions at the congress.

**Background to TC's work on this topic:** This is the main part of the work for TC 3.2 in the first half of each cycle.

**Low and lower-middle income countries:** -

**Gender inclusion & diversity:** -

**Potential duration:** Start of the Cycle until Congress 2026 proceedings are finished.

### 3.2.5 Winter maintenance in urban areas

**Purpose:** The purpose of this work is to gather information about the newest technologies and strategies used in winter service in urban areas. The collection of different approaches makes it much easier to see how one can improve the own winter service.

**Preliminary research questions:** Cities and urban areas with significant winter weather events experience unique challenges when it comes to delivering winter services to the traveling public. Even if regular snowfalls can be handled, extreme snowfalls need special preparations and actions. What are good use cases to deal with winter events in urban areas?

**Importance to roads agencies:** Based in a deep research on worldwide use of new technologies on winter service, the report could give some examples of tests or studies to these topics. Not only winter service is impacted also road design plays a large part in operational winter service in winter.

**Audience:** This work is mainly for operational winter service personnel and decision makers.

**Deliverables:** Case studies, survey, briefing note, workshop or conference.

**Background to TC's work on this topic:** This has been part of the last two cycles and was good accepted and also had good numbers of papers on this topic at the last two winter congresses.

**Low and lower-middle income countries:** Some technologies, such as the use of brine, are better and cheaper to use if one knows how to use them correctly. Extensive and expensive research has already been done, the outcome is part of the report.

**Gender inclusion & diversity:** Different aspects of traffic planning and modes of transportation affect diversity. If such topics appear in the report they will be highlighted.

**Potential duration:** This will start with the cycle with the main working period during the second half and end with the cycle. A draft will be presented at the Winter Congress 2026.