



Issue 3.4.3 - Share Knowledge Report on XIIth International Winter Road Congress

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XII INTERNATIONAL WINTER ROAD CONGRESS



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Topic I - Strategies, Levels of Service and Standards Lacis, Latvia

Topic II - Performance and financing Karjalainen, Finland

Topic III - Safety and Mobility in Winter Hanke, Germany

Topic IV - Environment Schlup, Switzerland

Topic V - Winter Maintenance Management Systems Pisano, USA

Topic VI - Snow and Ice Control Technologies Ishimoto, Japan

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News in Torino since the XIth International Winter Road Congress in Sapporo, Japan.

- **Out-sourcing of winter road maintenance continues and expands to more countries. New focus on contractor performance monitoring. Finland**
- **Partnership between road administration and road user. Example**

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News in Torino

- **Socio-economic model to assess the consequences for road users, road administration and the society at large of changes in strategies and maintenance.**

Vintermodell

- **Advanced Winter Maintenance Management System (WMMS) generates automated calls for intervention.**

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News in Torino

- **Cost-Benefit-Analysis of winter maintenance in pedestrian areas.**
- **Life cycle assessment of the environmental impacts of spreading materials.**

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A life cycle assessment of the environmental impacts of spreading materials shows that only about one third came from the material, salt and abrasive, itself.

Plants are more susceptible to anti-icing chemicals at the end of winter, when they enter their active phase.

The probability is low that snow dumping will significantly pollute the water of a river or fjord.

All Road Administrations are striving to improve the winter maintenance to minimize salt applications.

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- Reports of trials and benefits of adding sugar (glucose, fructose) to salt spread on roads.
- Spreading of sand with hot water. Norway



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- **Remote sensing of grip (friction) factor.**
- **Electronic Tongue to constantly monitor in-situ levels of chlorides.**

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- **Concerns about effects of salt on buried archaeological artefacts.**



Ploughing and salting near some burial mounds in a Viking Age grave-field.



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- **Think winter maintenance at every stage of planning a road.**

Recommendations for future R&D areas

- Weather and road condition related traffic management and information systems
- Winter Maintenance Management System on strategic level and day-to-day level.
- Climate change – impacts on the transportation system and pro-active management.
- Development of spreading methods.
- Traffic safety including also pedestrian safety.
- How to share knowledge in an efficient way.



8-12 February
XIIIth International Winter Road Congress

BIENVENUE - WELCOME