



XIII
INTERNATIONAL
WINTER ROAD
CONGRESS

QUÉBEC, FEBRUARY 8 TO 11, 2010



Québec 

SUSTAINABLE WINTER SERVICE FOR ROAD USERS

The environmental sub-model of the Swedish winter model – updated algorithms for the description of salt damage to roadside environment

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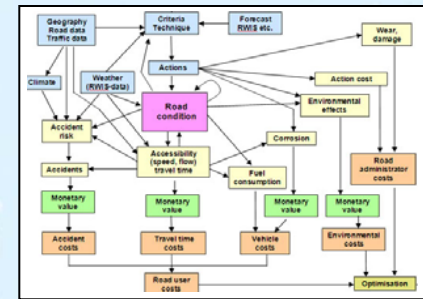


FINDING A BETTER WAY

The Swedish Winter Model «Vintermodellen»

The road condition influence on:

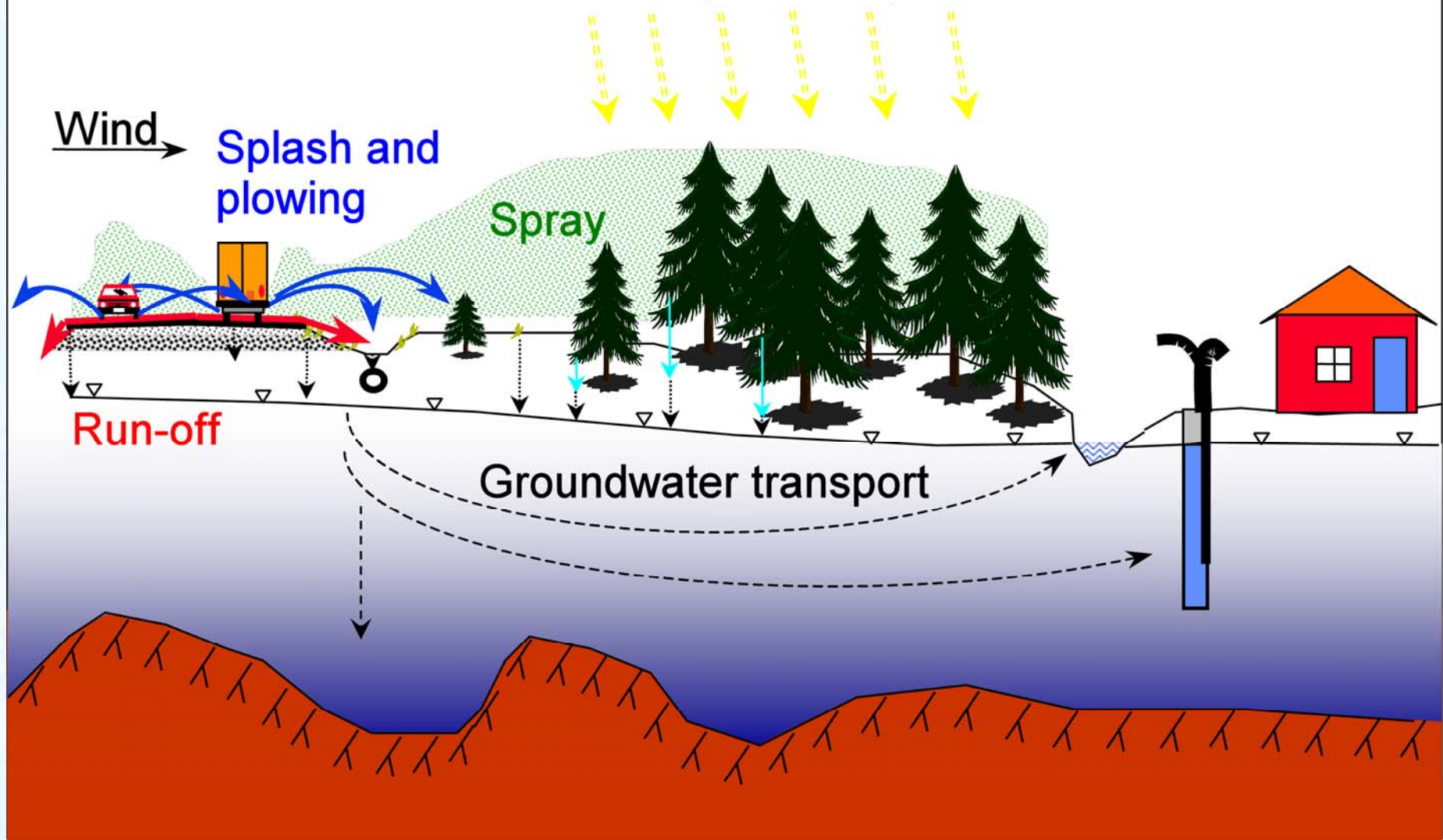
- Accident costs
- Travelttime costs
- Vehicle costs
- Environmental costs
- Road administrator costs



Please learn more at the presentation by Möller on Wednesday and at our posters on Thursday, or at www.vti.se/winter on any day...

By changing in-data, the different costs will be influenced and new scenarios may be produced.

Atmospheric deposition



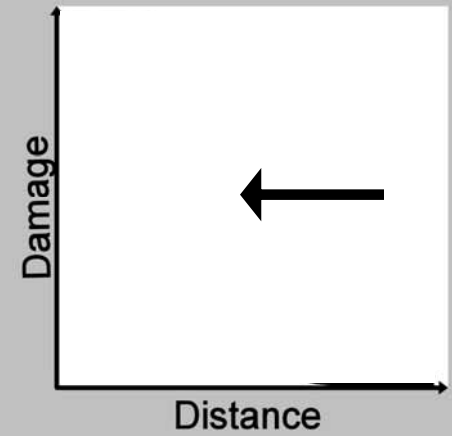
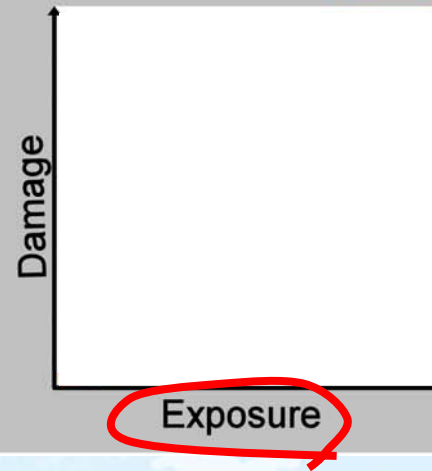
SALT

VEGETATION

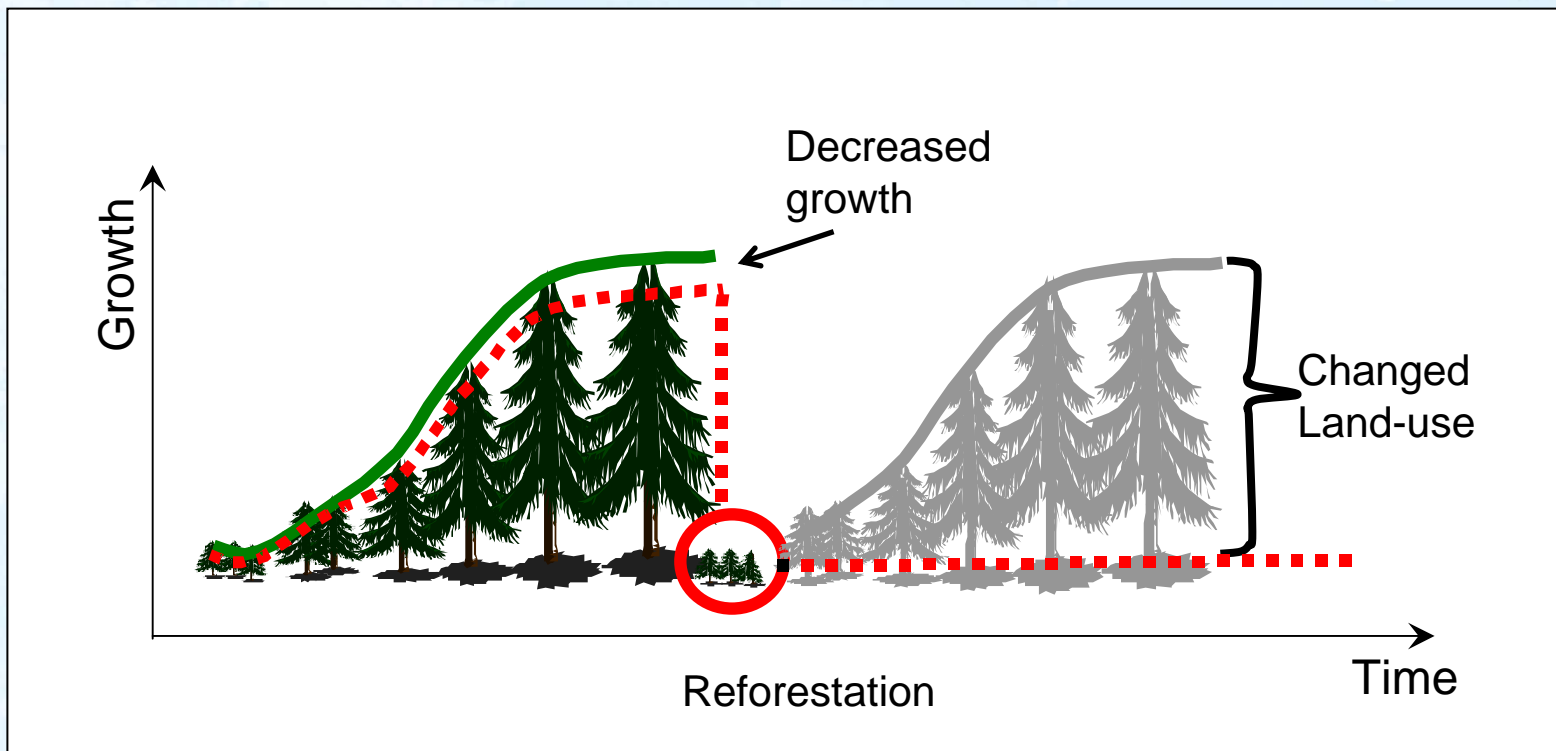
DAMAGE



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What is the damage on vegetation?

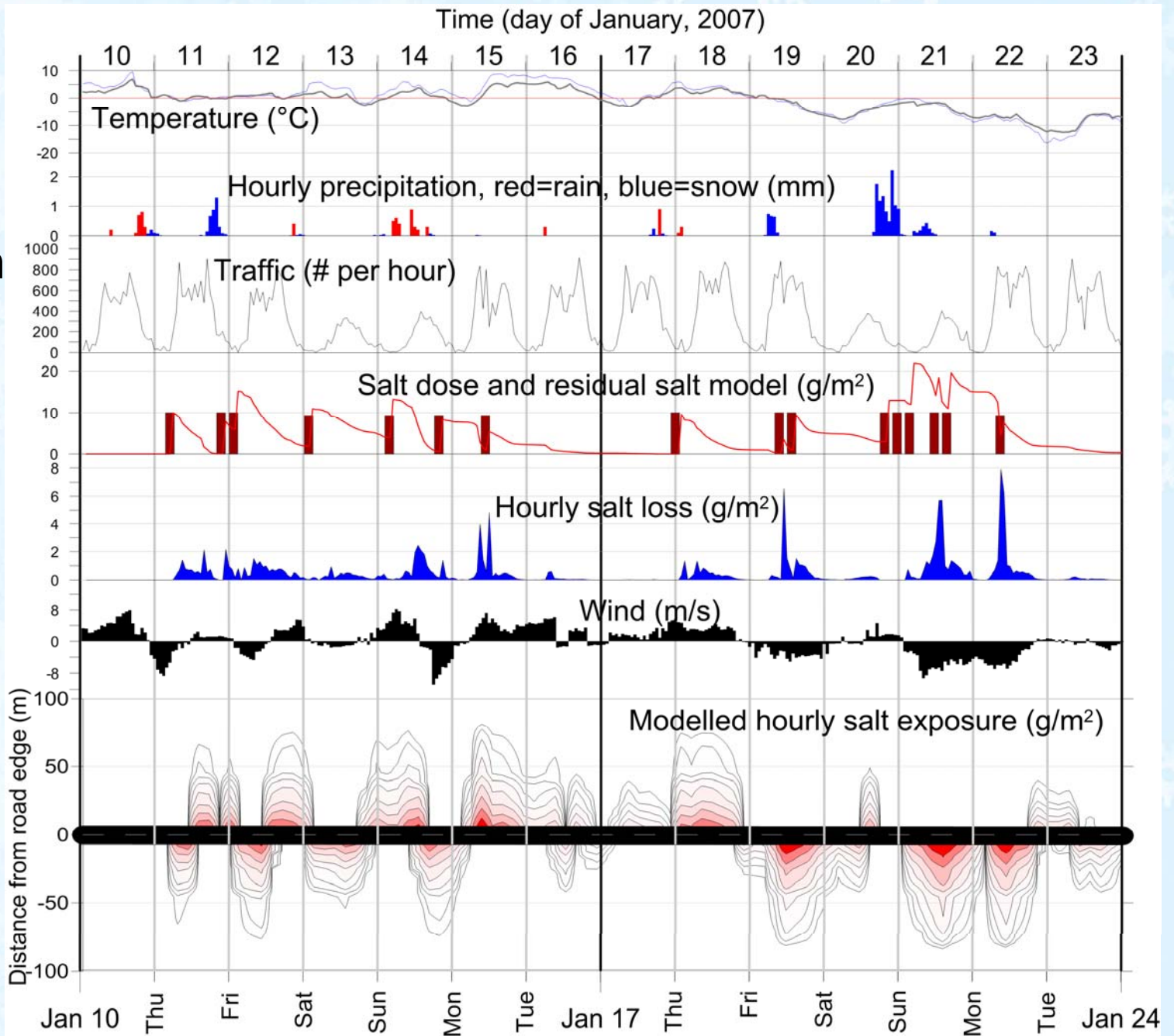


The environmental costs

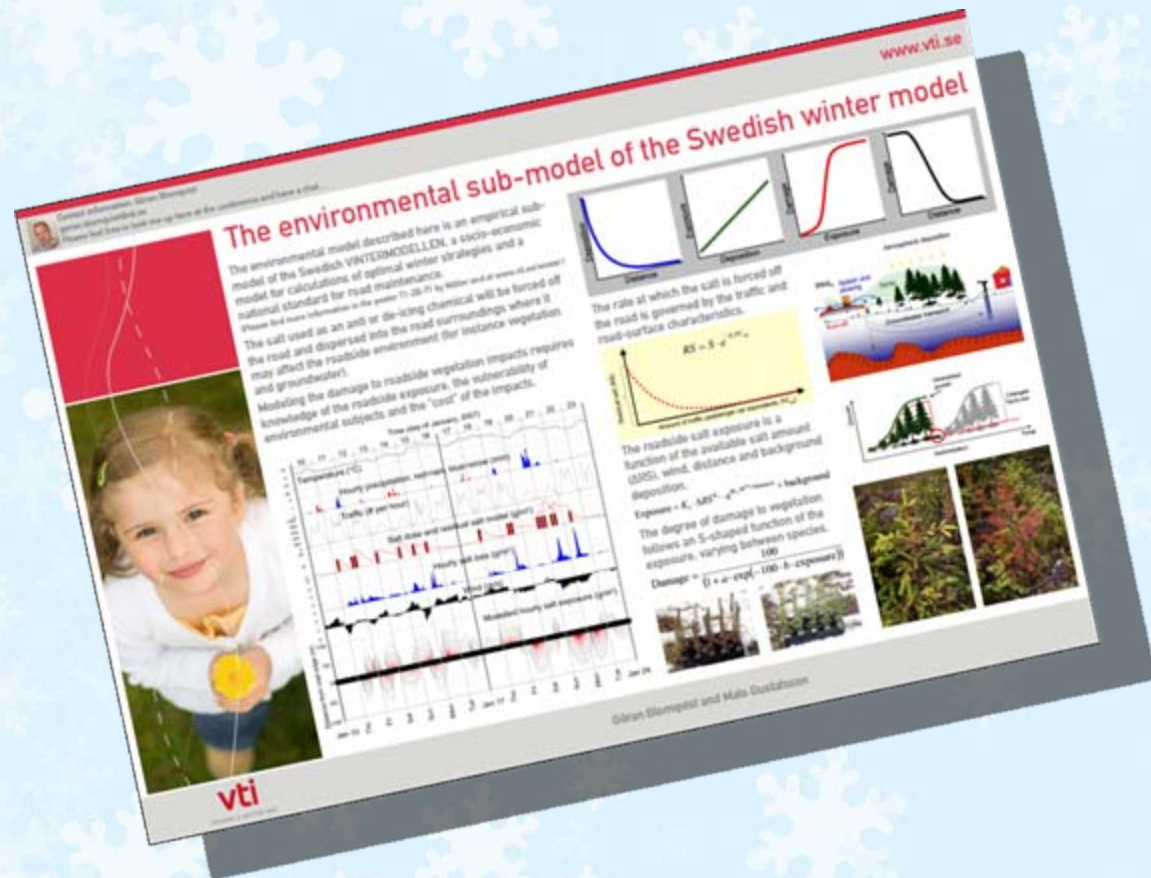
- The environmental costs in the environmental sub-model are the impacts of anti- and de-icing salt on roadside vegetation and groundwater.
 - Costs for damaged vegetation is the price for buying an area of land next to the roads and a "price" on the aestetical cost.
 - Costs for groundwater pollution is, in this modell, based on the cost of building a groundwater protection system along the road.



- Click h



- Please feel free to come and discuss with me in the Nordic pavilions on Wednesday or at the poster session on Thursday



- Overviews and latest results will also be available at:

www.vti.se/winter

The screenshot shows the VTI website interface. At the top left is the VTI logo with the tagline 'FINDING A BETTER WAY'. A navigation menu includes 'About VTI', 'Research & Development', 'Measurement & Testing', 'Publications', 'Road Safety on Four Continents', 'Library', 'Press Room', and 'Contact us'. The main content area is titled 'Winter' and features a photograph of a snowy road. Below the photo, the text reads: 'Winter traffic and winter road maintenance. It is important to develop effective strategies and methods for operating actions and to produce knowledge of the effects of different winter standards for road users and road administrators, as well as society in general. It is also important to develop methods for efficient measurement of the standards achieved, described in terms such as evenness, friction and road condition. The research on winter traffic and winter road maintenance carried out by VTI, Swedish National Road and Transport Research Institute, covers a broad spectrum and encompasses methods and characteristics as well as the influence of winter road management on road safety, accessibility and the environment. In addition, studies are made of the effects of using various types of tyres and the economic consequences for the community. The research conducted by VTI covers driver education (improved training in slippery conditions) and driver behaviour in winter, as well as the vehicle and its winter equipment. Vehicle research focuses on the stability of heavy vehicles and passenger cars, as well as on braking and steering performance in winter road conditions. Learn more about the research field winter'. On the right side, there is a 'News Archive' section listing dates from 2010-02-05 to 2009-09-17, and a 'Contact us' section listing several staff members with their titles and email addresses.

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Thank you for your attention!

