

Winter Service

Preparing for Extreme Snowfall to Prevent Large-Scale Vehicle Stranding

Services routiers hivernaux

Mesures face aux chutes de neige extrêmes visant à prévenir les blocages à grande échelle



- Due to climate change, intensive snowfall events and the amount of snowfall have been increasing in recent years, and the risk of large-scale vehicle stranding caused by vehicles getting stuck on expressways has been increasing.
- The conventional policy focused on reopening closed road sections as much as possible. However, this has changed in view of the fact that extreme snowfall events involving intermittent intensive snowfall have been occurring every year.
- The new policy is to carry out preventive road closures before the occurrence of vehicle stranding in time zones and road sections in which extreme snowfall is likely to occur, in order to start snow removal operations promptly after snow stops falling so that roads can be opened to traffic as soon as possible. In the Kanazawa area in north-central Japan, which experienced large-scale vehicle stranding, no similar road closure has occurred since the preventive measures were taken, but vehicle stranding problems remain unsolved in other areas. Possible causes include the fact that the roads where such problems occurred are heavy-traffic routes with many large vehicles and many summer-tire-equipped vehicles driven by drivers inexperienced in snow and ice conditions.
- Further efforts are also underway to introduce new equipment in order to improve on-site activities.

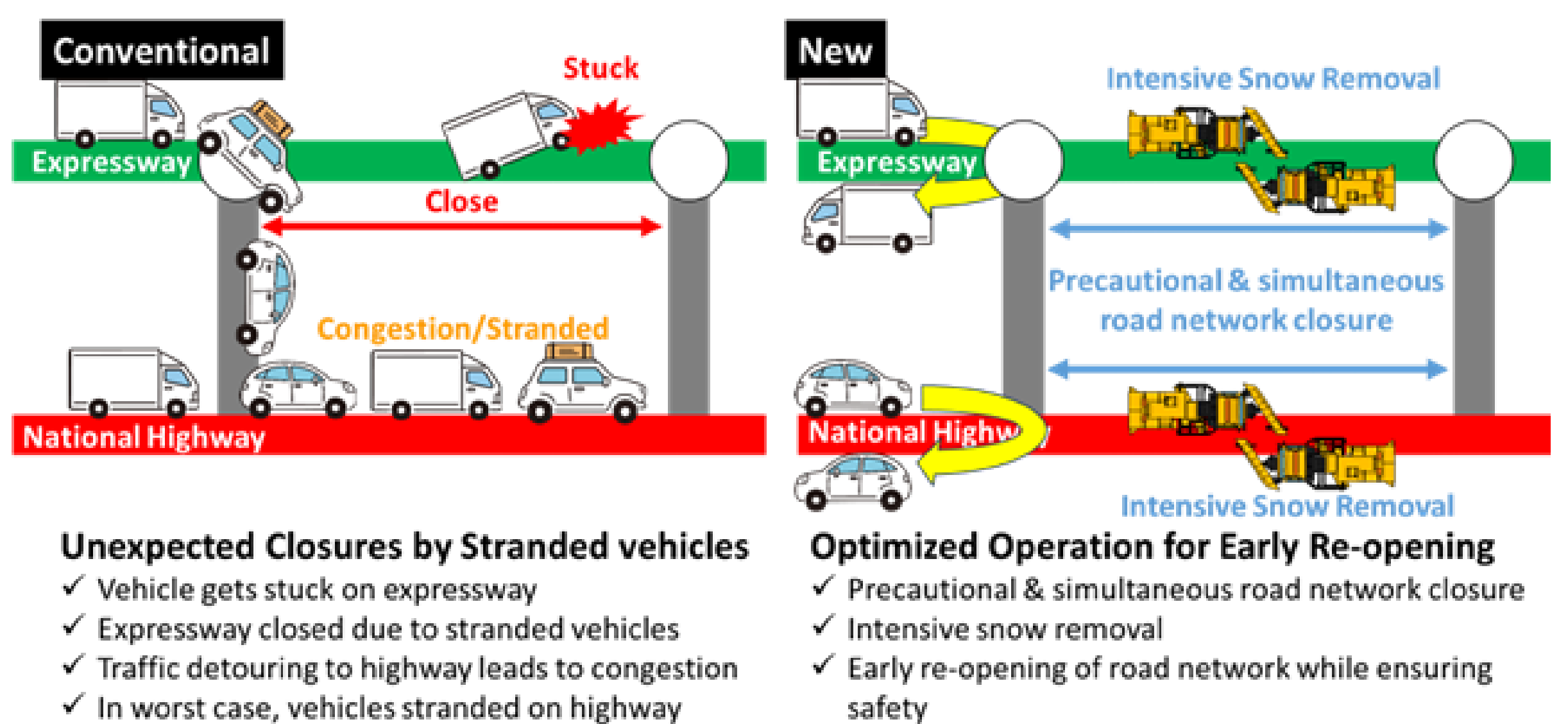
Preventive road closure

Large-scale vehicle stranding



Asking drivers whether they want to evacuate temporarily

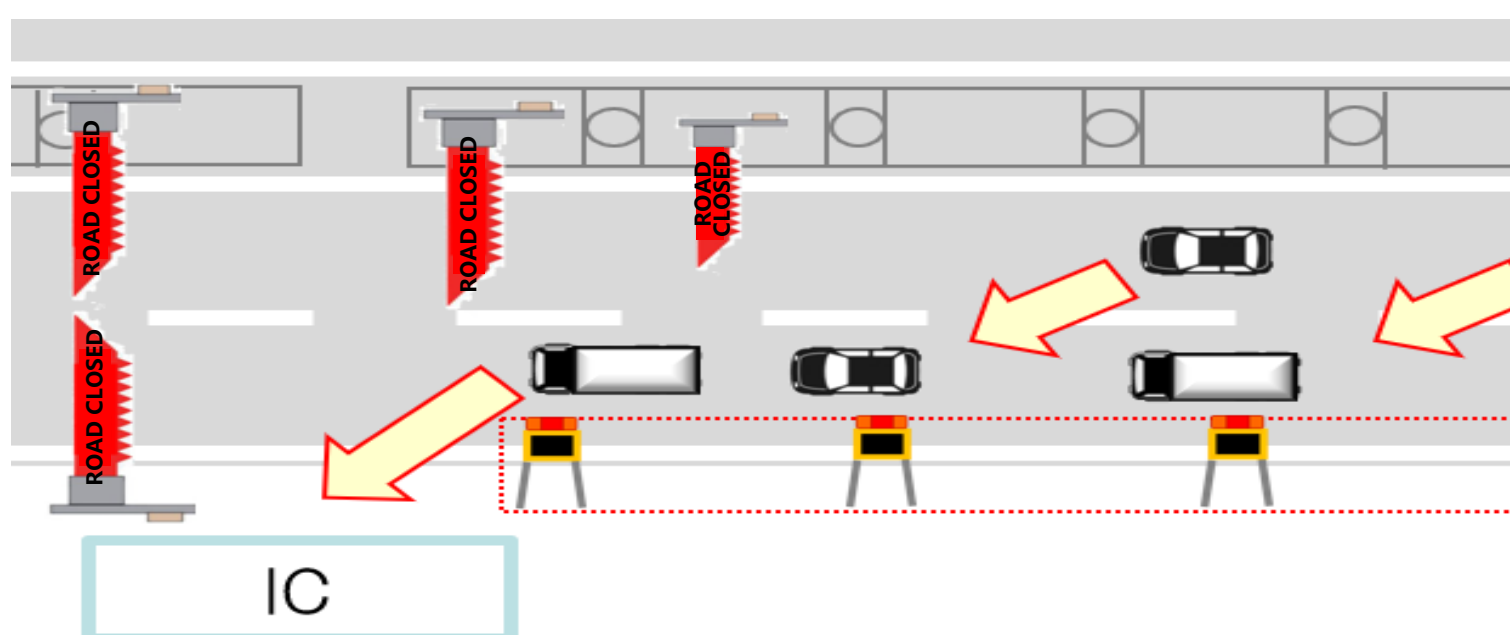
Preventive road closure



Improvement of on-site activities

Inflatable crossing barriers

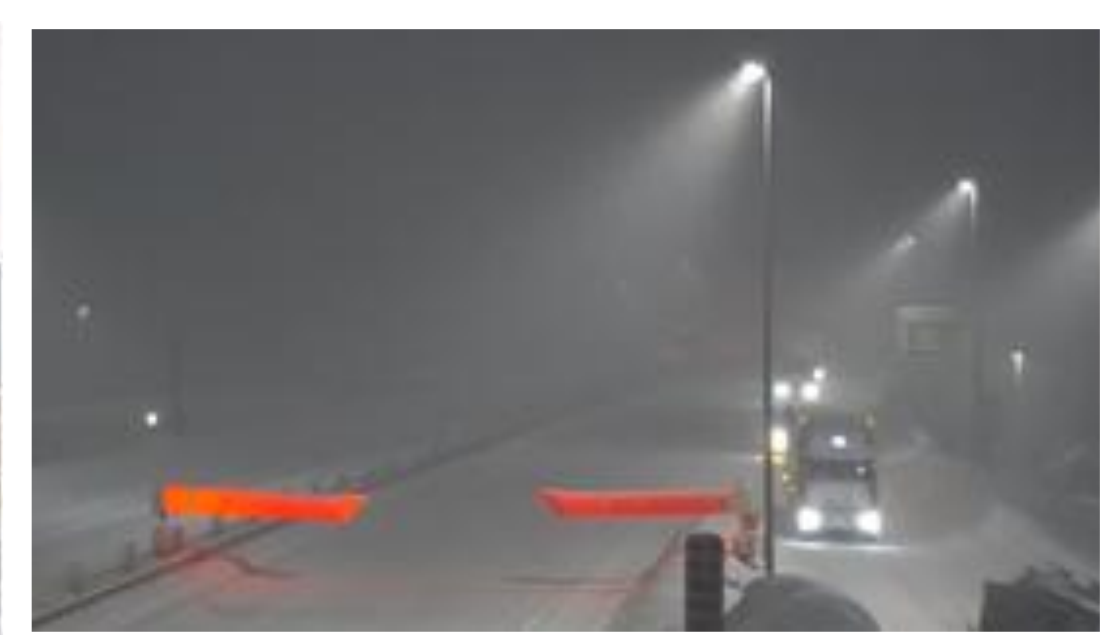
The first thing to do when closing a road is to display a road closure message on message boards. However, some vehicles may have already entered the road closure section before the road closure begins, so they may get stuck or stranded. In order to prevent such situations, inflatable crossing barriers have been installed to enable physical closures to be performed in real time while information is displayed on the message boards.



Road closure with inflatable crossing barriers



Inflatable crossing barriers



EV snowmobiles utilized to assist road users

The standard approach for collecting information on stranded vehicles and delivering emergency relief goods to road users was to walk or use sleighs to reach stranded road users, which were labor-intensive and time-consuming. To perform those tasks efficiently, EV snowmobiles and drones have been introduced, and efforts are underway to strengthen emergency response services by conducting drills.



EV snowmobiles



EV bike that can also be used as a snowmobile

