**Template 4 for OSPOR 2025**

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**Arctic Meteorological and Geographical Observations on Dutch Whaling Vessels in 1758, 1759 and 1760**

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**Abstract**

Recently, snowstorms have become extremely severe in the Okhotsk Area of Hokkaido, Japan. They have ................................ and by the Civil Engineering Research Institute for Cold Region.

**Key words:** road, snowstorm countermeasure, snowbreak forest, snowstorm, traffic hindrance

**1. Introduction**

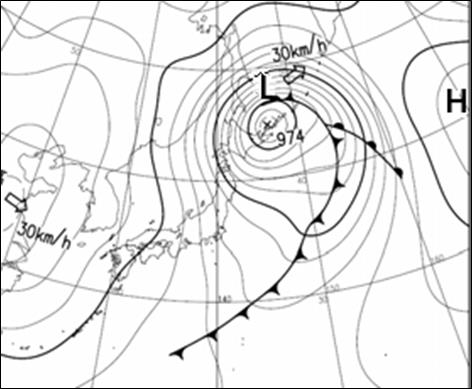
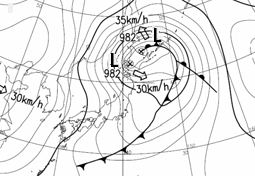
Hokkaido is designated as a snowy cold region, and the Okhotsk Area has particularly severe...........

**2. Snowstorm damage in the Okhotsk area**

***2.1 Storm paths over Hokkaido***

Low-pressure systems that bring heavy snowfall and snowstorms to Hokkaido have various characteristics, depending on their paths (Fukamachi *et al*., 2004).

There are three major types of low-pressure systems as shown in Fig. 1. ..........



15:00, March 2,2013

9:00, March 2, 2013

Fig. 1 Low-pressure system with two centers near the Okhotsk District

***2.2 Snowstorms and road traffic hindrances in* *Okhotsk Area***

Roads in Eastern Hokkaido are frequently closed due to blowing snow (Kawamura *et al*., 2007; Takahashi and Kosugi, 2010). ........ on national highways in Hokkaido (Fig. 2). ......

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**5. Conclusion**

This paper has explained road traffic disruption in the Okhotsk Area, which has particularly...........

**References**

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If possible, add Japanese summary (5-20 lines) in the end of paper.

(If possible)

**Summary in Japanese**

和文要約

1760年前後のオランダ捕鯨船による  
北極域の気象学的・地理学的観測

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捕鯨とニシン漁業は、オランダ黄金時代（1600-1800）の主要な経済活動の担い手であった。.........

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