REPORT

SNOW AVALANCHE DAMAGES IN NORWAY 1981/82

by Krister Kristensen

58810-3 7 May, 1982





PREFACE

THE WORK BEHIND THIS REPORT WAS SPONSORED BY THE ROYAL NORWEGIAN COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (NTNF). THIS SUPPORT IS GRATEFULLY ACKNOWLEDGED.

THE REPORT CONSTITUTES PART OF THE EFFORT IN THE FIELD "SNOW MECHANICS AND AVALANCHES" DESCRIBED IN THE LONG RANGE RESEARCH PLAN FOR NGI, 1982-86 (RESEARCH AREA 4, PROGRAM 4.2).

NORWEGIAN GEOTECHNICAL INSTITUTE

KAARE HØEG

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INTRODUCTION

The Avalanche Section at the Norwegian Geotechnical Institute after each winter compiles a survey of accidents and damage caused by snow avalanches. Serious accidents are investigated by NGI and reports are published in the report series 58800.

This report gives a summary of avalanche damages this winter and a short mention of the most serious occasions.

THE WINTER 1981/82

With only three fatal accidents this winter, this is the lowest figure since 1975/76. The average number of people killed by avalanches the preceding five years has been nine per year.

Skiers account for two of the fatalities, while one person was inside her house when it was crushed by an avalanche. Two of the victims were found dead after a burial of more than two hours, one skier was found unconcious after 45 minutes and later died in hospital. The victims were found by organized rescue crews, one of the skiers was found by an avalanche dog.

At least 28 people were caught in avalanches and survived. Of these were 14 skiers, 2 climbers, 4 construction workers, 3 were staying in their houses and 5 in vehicles on public roads. All the survivors were found/dug out by party members or bystanders, or managed to dig themselves out. Of the 31 people involved in avalanches, 21 probably triggered the avalanches themselves, while 10 were caught by avalanches that released spontaneously.

Norwegian Geotechnical Institute NGI

NGI

Even if avalanche fatalities were relatively few this winter, considerable damage was done to housing and property. At least 48 buildings were more or less damaged, of these were 13 residential buildings. The fact that no human lives were lost owes to coincidences and that many houses were abandoned when the avalanches occured. Information about how many houses that were abandoned for fear of avalanches is not available.

2 January 1982: Rognan, Nordland

A 15 year old boy was skiing in the lower part of a slope with a vertical height of 20 metres, when a slab avalanche released and buried him. An accompanying adult searched for the boy, but was unable to locate him and went for help. A rescue team with an avalanche dog was brought in by helicopter and the boy was found shortly afterwards. He had then been buried for almost three hours and all efforts to revive him were in vain.

9 January 1982: Haram, Møre og Romsdal

Three boys skiing down a small slope released an avalanche. Two of the boys, only partly buried, managed to free themselves, while the third boy was completely buried. After about 45 minutes he was found unconciuos. He was brought to hospital with a body temperature of only $28\ ^{\circ}\text{C}$ and later died despite treatment.

13 January 1982: Storvikskaret, Nordland

A taxi with the driver and one passenger was buried when an avalanche filled the road with nearly four metres of snow. The car was not badly squeezed and the passenger, who happened to be a diver, managed to get hold of his compressed air tubes. Using these to preserve oxygen the two men managed to dig their way up through two metres of avalanche snow and after about two hours they were out in the free.

20 March 1982: Vaa, Telemark

About 5 a.m. a house with two persons, an elderly woman and her grandson, was crushed by an avalanche. Search for the two in the house was started at once by the neighbours and after about 90 minutes the boy was found in his bed under boards and debris, safe and sound. Half and hour later the woman was found dead. She had apparently died from the injuries she got when the avalanche hit the house.



11-12 April 1982: Møre og Romsdal

Considerable material damage was done in the municipalities of Stranda, Eidsdal and Rauma during the Easter Holiday. Several days of heavy snow fall caused many large avalanches, damaging at least 33 buildings among which were 11 residential houses. Most of the main roads were blocked for several days.

County	People		Buildings			Vehicles		
	Killed	Injuried or buried	Residents	Agricultural	Recreational	Other	On public roads	Parked
Buskerud		3						
Finnmark		1	1					
Hordaland		1					1	
Møre og Romsdal	1	6	11	5	14	5	1	25
Nordland	1	5					1	
Sogn og Fjordan	e	1				1		
Sør-Trøndelag		2		* 1		2	,	2
Telemark	1	1	1		3	1		
Troms		7			1		1	
Nord-Trøndelag		1			1	2	1	
Norway	3	28	13	6	19	11	5	27

Summary of avalanche damages in Norway 1981/82.

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