ユネスコへのわが国からの災害なだれ報告について

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Data on Destructive Avalanches in Japan Reported to Unesco

By

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はじめに

ユネスコは、自然災害についての資料を収集し、その年報(Annual summary of information on natural disasters)を1966年以降現在まで発行している。1970年までに取り上げられた項目は、地震(earthquakes)、 津波(tsunamis)、高潮(storm surges)、 噴火(volcanic eruptions)であり、1971年からはこれらに地すべり(landslides)、災害なだれ(destructive avalanches)、 異常な氷河現象(unusual glacier phenomena)の項目が加えられることになった。1)2)3)

国立防災科学技術センター雪害実験研究所が、日本からの連絡機関になった経過を簡単に記す。ユネスコは、1970年5月4日から6日にかけて、パリで国際雪氷委員会(International Commission of Snow and Ice,略称ICSI)の下部組織である"なだれ作業部会"を開催し(日本からは故荘田幹夫博士、当時は日本国有鉄道所属、前雪害実験研究所長が出席)、なだれ災害の起こりそうな国々に対して、外交ルートを通じて、各国のなだれに関する国内連絡機関(員)の指名を提案し、日本においては、国際水文学十年計画(IHD)国内委員会で検討の結果、雪害実験研究所がこれに当たることになったのである。4)

この報告書は、日本で起きた災害なだれの1970年から1974年分までのユネスコへ 送付した回答書を集録したものである。

(1) ユネスコから求められた質問状について

災害なだれについての質問状には2種類あり、1つは(A)個々のなだれについてのやや詳しいものと、他の1つ(B)はそれらをまとめたものである。(A)、(B)は著者が仮に名付けたもので、付属資料の最初の各一枚に、質問状(A)、質問状(B)の表示をした。なお、質問状(B)はクリーム色の紙を使ってある。

(2) 日本からの回答書

参考文献(3)の手紙での要請により、日本からは、1970年から1971年の冬季間に 発生した災害なだれを1971年7月9日付でユネスコへ報告し、現在まで冬季間ごとに 発生した災害なだれを報告している。

(3) 資料収集の方法

毎年6月に各県(沖縄県のみを除く)の消防防災課に調査票(付表1)を送付し,資料の収集をはかっている。回答率は46年度(1970~1971年冬)85%,47年度(1971~1972年冬)85%,48年度(1972~1973年冬)80%,49年度(1973~1974年冬)76%であった。1973年から1974年の冬以降は,上記の方法以外に,新聞等からも資料を収集している。

(4) ユネスコへの報告の概要

1970年から1974年までの報告の一覧表は,表1のとおりであり,その詳細(英 訳してユネスコへ送付した回答書の全て)は付属資料としてこの報告書の末尾にのせてあ る。なおユネスコからの年報には,我が国から参考として添付した図表は印刷されていな い

災害を及ぼした "異常な氷河現象" (unusual glacier phenomena)についても質問状(付表2)が来ているが,我が国ではその例はいまだ見られていない。

ユネスコへの回答書作成にあたり,各県の関係者の皆様から多大の御協力をいただいたととを記し,ことに感謝の意を表する次第である.

参 考 文 献

- 1) Unesco, 1973: Annual summary of information on natural disasters 1971, Paris.
- 2) UnescoのDepartment of Environmental Sciencesから日本の伊藤良二氏
 (Secretary, Committee for the IHD, General Secretary for the
 Japanese National Commission for Unesco) 宛への手紙。1971年4月26

日付, reference SCE53/35.

- 3) Unesco の Department of Environmental Sciences から,国立防災科学技術センター雪害実験研究所長宛への手紙、1971年6月1日付,reference SCE 53/35.
- 4) *雪崩に関する国内連絡員" 1971,雪氷,33巻,3号,93頁.

(1975年9月10日 原稿受理)

表1-1 コネスコへ報告した,1970年12月~1973年5月までに発生した災害なだれ。

1970/1971年冬

•	,	/ - 1 . 1												
通し番号	月 日	1	生	班	名	緯度(北緯)	経度(東経)	_	分類*	死者数(負傷者数	損害	備	老
1	12.8		(郡松之山町)	大字浦田	6026	37°05′	138 ° 3	37,	В	1	0	0	ı	
2	12.8	新潟県古志郡山古志村	S山古志村, 県3	道梶金~	・県道梶金~小松倉の間	37°19′	138 5	54'	æ	7	0	0	l 	
ന	12.12	福井県大野市湯上, 国道	(陽上, 国道	157号		35 ° 50 ′ 30 ″	136 ° 4	40,	H	-	2	0	1	
4	1 2.2 0) 新潟県東頸城郡松代町大字小屋丸, 町道	(郡松代町大:	字小屋丸	,町道	37 ° 07′	138°3	37′	H	-	0.	0	1	
2	1. 1	1. 1 新楊県南魚祒郡塩沢町大字清水,	郡塩沢町大	字清水,	前卷機山	36°58′	138°5	57'	E-1	81	0	0	1	
1 6	1971/1	1972年冬			_				_	-	_		. <u></u>	
	1.16	長野県茅野市北山町,横岳	「北山町,横」	田		35 ° 58′	138°2	22'	T	2	ന	0	i	
2	2.10 (?)	, 山梨県韮崎市清哲町,鳳凰	「清哲町,鳳	画门		35° 42′	138 ° 1	18,	l	0	0	建約1戸	無人の小屋	翢
ಣ	2.1 1	鳥取県西伯郡大山町,フ	3大山町,大	山(北壁	大山(北壁滝沢尾根)	35°23′	133 ° 3	33,	H	က	ന	0	1	
4	2.16	山梨県南都留郡鳴沢村	~	四十四		35° 22′	138°4	721	၁	0	0	道路·森林 建物	l	
വ	3.20	静岡県御殿場市,富士山(引布,富士山		南東斜面2.5合目)	35°18′	138°5	,99	H	2 4	0	車3台	1	
. 9	4.10	栃木県那須郡那須町湯本		,朝日岳		37°08′	139°5	28,	T	63	0	0	ı	
1 ;	972/1	1973年冬						-		-	-			
-	11.21	11.21 北海道上川郡東川町, フ	\mathcal{L}	ト雪山盤 ノ沢	从	43 ° 09′	143 ° 3	31,	T	വ	0	0	1	
2	12. 1	長野県南安曇郡安曇町	•	条トンチ	然トンペラ出口 (下幅財便)	36°13′	137 ° 3	37,	Е	,4	0	0	ı	
က	1.1 -2	長野県南安曇郡,北穂高涸沢と横尾谷出会	部,北穗高;	涸沢と横	尾谷出会	36°18′	137 ° 4	40,	E	(大男 <u>)</u>	0	0	1	
4	1.29	郡馬県利根郡水上町字土合,谷川岳一ノ	5水上町字土	合,谷川	岳一ノ倉沢	35°51′	138 ° 5	57,	H	(大盟)	0	0	1	
5	5.17	7 福島県南会津郡只見町	•	鬼面山六十里越	十里越	37°18′	139°1	13,	W	1	_	0	1	

* I: 旅行者,W:作業中の人,R:住人,C:交通・通信障害

表1-2 ユネスコへ報告した,1973年12月~1974年4月までに発生した災害なだれ。

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備		译	サークトーク	 	ļ		l i	١	1	1	保育費	4ーキメームへ	· ***	1	4-+×- 4ん	. 1	ŀ	ł	ı	魯 瑤	1	<u> </u>	4ーキとームへ	1	i	1
再		· ·	> c	" ***	•	¥ \$ c	>	車を		オーリフト	華 物		· •	0	0	道路と重	建物		100	0	肆 物	. 0		G		0
自傷苦物	6	1 C	· c	o c	0) ¢	1 –	+ +-	+ C	0	0	, ,	ť		0	0	0		2	0	0	2	· C	0	, ,	0
死者数		່ຕຳ		1 0	· c	· -	-	٠ .	,	1 0	0	,	, m	0	-	0	0	,	-	rc	0	6	2		က	23
大脚子	A	: [-	F	Ü	ρ (21	™	: E	- 14	E	ပ	æ	Ë	Е	M	[-1	T&C	æ	ĸ	E	⊣	В	Е	E	×	<u></u>	H
経度(東経)	139 9 30	D	138 087	138 317		140°50'	140 915	140°37'	139 ° 08'	137°48'	140 ° 40'	138°10'	138°21'	137°43'	138°12'	136°38'	140 ° 45'	139 ° 44'	136°38'	137 ° 46'	140°30′	137 0 45/	141 ° 02/	139 ° 277	140 ° 39/	139 ° 487
緯度(北緯)	37°49′	35°40'	36°48′	36°59'	39°09′	40°15′	40°17'	39°18'	37 32/	36°39'	39°00′	36°07′	35°59'	36°30′	36°057	36°13′	40°20'	37°30′	36°24'	36°45′	40°10'	36°35′	42°56'	39°23'	40°11'	37°15′
第 生 地 名	新潟県新発田市, 滝谷山(加治 治水ダム工事現場)	山梨県中巨摩郡芦安村,白根山(北岳)	長野県上水内郡信濃町・黒姫山(黒姫スキー場の近く)	長野県下水内郡栄村樽坂, 国鉄飯山線	/	秋田県鹿角市,柴内山国有林	秋田県山本郡藤里町粕毛	秋田県横手市大沢町沼山	新潟県南蒲原郡下田村長野,三九郎平山(山倉山)	長野県北安曇郡台馬村,五竜遠見スキー場	秋田県雄勝郡皆瀬村桂沢	長野県小県郡和田村,霧ヶ峰高原	長野県茅野市,八ケ岳連峰横岳	長野県大町市,新高瀬川発電所建設現場	長野県茅野市,車山スキー場	石川県石川郡尾口村梁瀬	秋田県鹿角郡小坂町・ツクシ森	福島県河沼郡柳津町	石川県石川郡鶴来町中島	長野県北安曇郡白馬村,白馬山	秋田県陽沢市,岩ノ沢山	長野県大町市, 鹿島槍ケ岳	北海道札幌市定山溪,無意根山	福島県南会津郡只見町	秋田県雄勝郡東成瀬村田子内平良	福島県南会津郡下郷町大字戸赤字竹ノ下,倉骨沢
A п	12.21	1. 1	1.12	1.16	1.24	1.24	1.24	1.26	1.28	6	0	2.10	2.11		4	4	3.6	3.	3.16		3.2.2				4. 1	4.8
通し番号	П	2	ო	*	2	9		∞	<u>o</u>	10		12	e -	14		1 6	17	1 8	1 9	2 0	21	2 2	2 3	24	2.5	26

* T:旅行者,W:作業中の人,B:住人,C:交通・通信障害

付表1 各県へ照会した災害なだれ調査票

ユネスコ(国際連合教育科学文化機構)環境科学省

災害なだれ報告書

県,道,府 19/19 年冬期のなだれの一連番号

なだれ発生地点(県,道,府市,郡町,村,字 山)

北緯 。 「 東経 。 」 被災地点の標高

西曆 年 月 日 時 分

なだれ事項

なだれの型 点発生 乾雪 表層なだれ

面発生 湿雪 全層なだれ

斜面の型 開平斜面 谷斜面

運動形式 けむり型 ながれ型

堆積地点での乾湿 乾雪 湿雪

なだれの発生した斜面の方位 北向き,東向き,南向き,西向き,北東向き,

南東向き,南西向き,北西向き

規模 発生地点:標高 m,幅 m,なだれ層の厚さ i

なだれ走路:長さ m,幅

m,幅 m,平均勾配

m,体積 m³

人

m

発生要因参考事項(不明のものは記入しないで結構です。)

積雪の構造

天気,風,気温等

直接原因(もし分っていれば)

なだれの推積:最大の厚さ

死傷者と損害

死者の数 人,行方不明者の数 人,負傷者の数 人, 無傷で救出 なれた者の数

建物への被害:全壊 棟,半壊 棟,埋没 棟,その他

その他の被害:森林,通信施設等

備考(救助作業,過去になだれの発生があったか等)

写真,スケッチ等があれば添付していただきたい。

付表2 ユネスコからの 異常な氷河現象 についての質問状

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

Report on Unusual Glacier Phenomenon (Surge, Icefall, Lake Burst)

DATE OF OCCU	RENCE:
LOCATION:	(Country, region, etc.; attach a map or sketch showing location; give latitude and longitude)
DESCRIPTION:	of phenomenon (or series of phenomena) with information on magnitude (estimation of volume of ice and/or water involved, length and width of affected area); attach photographs if possible.
CALIGRA	
CAUSES:	Morphological situation:
	Weather conditions (if relevant):
	Triggering mechanism (if known):
EFFECTS:	(Casualties, damage)
REMARKS:	
NOTES: 1.	Usual mountaineering accidents (breakage into crevasse, collapse of seracs or ice margins) should not be reported on this form.
2.	This form should be completed in duplicate for each glacier event and sent to the following address:
	The Director, Department of Environmental Sciences, Unesco, Place de Fontenoy, Paris 7e (France)

付属資料

1970年12月から1974年4月までに発生した災害なだれのわが国からユネスコへ 報告した回答書(A,B)

(最初の各一枚に質問状(A),質問状(B)の表示をした。なお,質問状(B)はクリーム色の紙を使ってある。)

質問状(B)

ANNUAL REPORT ON DESTRUCTIVE AVALANCHES UNITED NATIONS EXUCATIONAL, SCIENTIFIC AND CULIURAL ORGANIZATION Department of Environmental Sciences

COUNTRY: '	JAFAN address o	COUNTRY: JAFAN Winter 1970/19.71 Name and address of reporter: INSTITUTE OF SNOW AND ICE STUDIES, NRCDP, SUYOSHI-MACHI, NAGAOKA-SHI, NIIGATA-KEN	Winter 1970/19.71 F SNOW AND ICE ST	9.71 S STUDIES,NE	CDP, SUYOSHI	Shee. MACHI, NAGAC	Sheet No. 1
Serial number	Date	Location	Category*	Category* Number of Number of deaths injured	Number of injured	Damage	Remarks
Н	Dec.8	Dec.8 37° 05'N, 138°37'E	ਲ	1	0	0	
2	Dec.8	Dec.8 37° 19'N, 138°54'E	æ	7	0	0	ı
8	Dec.12	35° 50°N, 136°40°E	H	, r-i	2	0	ſ
±	Dec.20	Dec.20 37° 07'N, 138°37'E	H	н	0	0	; ;
rV.	Jan.1	36° 58'N, 138°57'E	Ħ	2	0	0	ı

* For accident to tourists, mark T; to people at work, mark W; to residents, mark R; to communications (roads, rallways), mark C.

Note: This form should be completed in duplicate at the end of each winter season; and sent, together with the reports on individual avalanches, to the following address:

The Director
Department of Environmental Sciences
Unesco
Place de Fontenoy
Paris 7e (FRANCE)

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

質問状(A)

Department of Environmental Sciences

COUNTRY:	JAPAN	Winter 1970/1971	Serial No.: 1
Name and ad	ddress of reporter: INSTITUTE FOR DISASTER PREVENTI	OF SNOW AND ICE ON, SUYOSHI-MACHI	STUDIES, NATIONAL RESEARCH , NAGAOKASHI, NIIGATA-KEN
LOCATION:	(Name of district, nearest town or 9509 OAZA-URATA, MATS Latitude: 37°05° N Lon	UNOYAMA-CHO, HIGASI	anche path) HI-KUBIKI-GUN,NIIGATA-KEN Altitude: 400m
DATE: De	c. 8 1970, Tim		
	VALANCHE:		
Type (Interna	ational classification):A.2B2.	C2D2E5F0	ntation: NORTH
Dimensions*			
Starting zone	:: Altitude: 400m	Width:	Depth of fracture: 1 m
Avalanche pa	ath: Length: 15 m	Width: 10 m	Average slope:
Deposit: Max	kimum depth:	Volume:	
Causes Snow structur	NEW SNOW DEPTH: 66		
Weather (snov	wfall, wind, temperature):	VFALL, NW 1 m/s,	+0.6°c
CASUALTIES	S AND DAMAGE:		
Number of per	rsons killed:	injured: 0	rescued unharmed:
Damage to bu	ildings (type, number, degree of de	estruction):	
Other damage	(forests, communications, etc.):	0	
REMARKS (re Dug imm but not	escue work, former history of avalar ediately after the ac resuscitated.	nches, etc.) Cident and tried	artificial respiration,
	raphs and/or sketches if possible.		
reportin	rm should be completed as soon as ag centre, be sent, in duplicate, tog ag address:	possible after the event and ether with the corresponding	, after checking by the national annual avalanche report, to the
Unesco. Place d	nent of Environmental Sciences, , e Fontenoy,		
Paris 7	e (France)		

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	JAPAN	Winter 1979/1977	Serial No.: 2	
Name and ad	dress of reporter:			·
	YAI AKOSHI-MURA, Latitude: 37°19° N	town or village, mountain area, av KOSHI-GUN, NIIGATA-K Longitude: 138054° E	EN 100 m	············
DATE:	C. 8	70; Time: 13h 40m =	C4h 40m (GMT)	
	VALANCHE:			
Type (Intern	ational classification):A	.2 B2 C2 D1. E5 FO O	sentation:	
Dimensions* Starting zone	e: Altitude: 140 m	W idth:	Depth of fracture:	
Avalanche p	ath: Length:70 m		Average slope:	
Deposit: Ma	ximum depth:	Volume:		
Causes Snow structu				
Weather (sno	wfall, wind, temperature):	SNOWFALL, WNW 3.6m/s	, +1.9°C	
Triogering m	echanism (if known):	_		•••••
Number of pe	uildings (type, number, degr	; injured:		
Other damag	e (forests, communications,	etc.):		
REMARKS (r	escue work, former history	of avalanches, etc.)		
Attach photo	graphs and/or sketches if p	oossible. *Please use metri	c system	
report			and, after checking by the national ding annual avalanche report, to the	
Depar Unesc Place	irector, tment of Environmental Scie o, de Fontenoy, 7e (France)	ences,		

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: JAPAN	Winter 1979 1971	Serial No.:
Name and address of reporter:		
YUNOKAMI, ONO— 35° 50°3 Latitude:	st town or village, mountain area, aval SHI, FUKUI-KEN O"N 136°40°E	500m Altitude:
DATE: Dec. 12	9.70 Time: 10h 30m = 0.	lh 30m (GMT)
	A2 B4 C2 D1 E5 F0	
	Orier	itation:ESE
Dimensions* Starting zone: Altitude: 420 m		
Avalanche path: Length: 420 m Deposit: Maximum depth: 5.5m		Average slope: 42°
Causes	(70, 55, 86cm from groun	nd to surface)
Weather (snowfall, wind, temperature)		
Triggering mechanism (if known):	· ·	
CASUALTIES AND DAMAGE: Number of persons killed:	2; injured:	; rescued unharmed :2
Other damage (forests, communication DAMAGED BY 20m LONG.	s, etc.): A FENCE FOR PROTEC	CTING FALLING STONES WAS
REMARKS (rescue work, former histor EVERY YEAR, WE HAVE SOI	y of avalanches, etc.) ME AVALANCHES AT THIS PO)INT.
Attach photographs and/or sketches i	f possible. *Please use metric sy	ystem
Note: This form should be completed reporting centre, be sent, in dup following address:	as soon as possible after the event and plicate, together with the corresponding	d, after checking by the national g annual avalanche report, to the
The Director, Department of Environmental So Unesco, Place de Fontenoy, Paris 7e (France)	ciences,	

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: JAPAN	Winter 19/19	Serial No.: 4
Name and address of reporter:		
LOCATION: (Name of district, neare ATJUDAI-CHO, Latitude: 37°07'N	st town or village, mountain area, a HIGASHI-KUBIKI-GUN, N Longitude: 138°37°E	valanche path) IIGATA-KEN Altitude: 350m
DATE: Dec. 20 1	9(9; Time: 1011 40:11 =	0/H 40III (GMT)
DATA ON AVALANCHE: Type (International classification):	A2 B4 C2 D1 E2 FO 0	rientation:W
		Depth of fracture: 1m
Avalanche path: Length:		Average slope:
Causes Snow structure: SNOW DEPTH: Weather (snowfall, wind, temperature)	llocm CLEAR, CALM, +2.1°c	
Triggering mechanism (if known):		
		; rescued unharmed:
Other damage (forests, communication	os, etc.):	
Attach photographs and/or sketches	if possible. *Please use metri	c system
Note: This form should be completed reporting centre, be sent, in du following address:	-	and, after checking by the national ding annual avalanche report, to the
The Director, Department of Environmental S Unesco, Place de Fontenoy, Paris 7e (France)	ciences,	

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: J	APAN	Winter 1970/1971	Serial No.: 5
Name and addre	ss of reporter:		
Ω.	AZA-SHIMIZU, SHIOZA	village, mountain area, avalanche p WA-CHO, MINAMI-UONUMA- gitude: 138°57'E Altitude	GUN, NIIGATA-KEN
		e: 10h 30m = 01h 30	
		e:#X117XIII V.#111X	(GM1)
DATA ON AVAI	LANCHE:	C1 D2 E1 F1	
Type (Internatio	mal classification);	Orientation	
Dimensions*			
Starting zone :	Altitude: 1700 m	Width: Depth	of fracture: 30-40 cm
Avalanche path		Width: 80 m Avera	
		Volume:	
Causes	•		
Snow structure:	NEW SNOW : 30-40	0 c m	***************************************
Weather (snowfa	ll, wind, temperature):	FAIR	
Triggering mech	anism (if known):		
CASUALTIES A	ND DAMAGE:		
Number of perso	ns killed:;	injured:; rescu	ed unharmed:
		estruction):	
		Q	
·····			
REMARKS (resc	ue work, former history of avala	inches, etc.)	

Attach photogra	phs and/or sketches if possible	*Please use metric system	
Note: This form reporting following	centre, be sent, in duplicate, to	s possible after the event and, after gether with the corresponding annua	checking by the national l avalanche report, to the
Unesco,	nt of Environmental Sciences, Fontenoy,		

ANNUAL REPORT ON DESTRUCTIVE AVAIANCHES UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION Department of Environmental Sciences

Serial Date Location Category* Number of deaths number of deaths number of deaths 1 Jan. 16 35°58'N 138°22'E T 2 3 2 Feb.1C(?) 55°42'N 138°18'E - 0 0 3 Feb. 11 35°23'N 138°35'E T 3 3 4 Feb. 16 35°22'N 138°42'E c 0 0 5 "ar. 20 35°18'N 138°56'E T 24 0 6 Apr. 10 37°08'N 139°58'E T 2 0	COUNTHY:	address o	COUNTRY:[apan	Winter 1971/1972 of.Snow.and.Ice.S	972 se Studies.	.Suxoshi-macl	Shee hi Nagaoka	Sheet Nol
Jan. 16 35°58'N 138°22'E T 2 Feb.10(?) 35°42'N 138°18'E 0 Feb. 11 35°25'N 135°35'E T 3 Feb. 16 35°22'N 138°42'E c 0 "ar. 20 35°18'N 138°56'E T 24 Apr. 10 37°08'N 139°58'E T 24	Serial	Date	Location	Category*	Number of deaths	Number of injured	Damage	Remarks
Feb.1C(?) 35'42'N 138'18'E 0 Feb. 11 35'23'N 135'35'E T 3 Feb. 16 35'22'N 138'42'E c 0 Zar. 20 35'18'N 138'56'E T 24 Apr. 10 37'08'N 139'58'E T 2	1	Jan. 16	35°58'N 138°22'E	T	5	3	0	
Feb. 11 35°23'N 133°35'E T 3 Feb. 16 35°22'N 138°42'E c 0 ar. 20 35°18'N 138°56'E T 24 Apr. 10 37°08'N 139°58'E T 2		Feb. 10(?)	35,42'N 138'18'E	ì	0	0	Uninhabited hut	ed hut
Feb. 16 35°22'N 138°42'E c 0 0 "ar. 20 35°18'N 138°56'E T 24 Apr. 10 37°08'N 139°58'E T 2	~	Feb, 11	35°23′N 133°33°E	₽	8	3	0	
Zar. 20 35°18'N 138°56'E T 24 Apr. 10 37°08'N 139°58'E T 2	4	Feb. 16		O	0	0	Road, for	Road, forpst and buildings
Apr. 10 37°08'N 139°58'E T 2		.zr. 20		E-1	24	0	3 cars	
		Apr. 10	37°08'N 139°58'E	€⊣	2	0	0	

* For accident to tourists, mark T; to people at work, mark W; to residents, mark R; to communications (roads, railways), mark C.

Note: This form should be completed in duplicate at the end of each winter season; and sent, together with the reports on individual avalanches, to the following address:

The Director
Department of Environmental Sciences
Unesco
Place de Fontanoy
Earls 70 (FARKE)

ONITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 1971/1972	Serial No.:	L
Name and a	ddress of reporter:Institute aterPreventionSuyosh	ofSnow andIceStudi i-machi,Nagaoka-shi,I	es,NationalResear Niigata ken	cch.Center
LOCATION	: (Name of district, nearest town	or village, mountain area ava	lanche nath)	
	.MtYoko-dakaKitayar	ma-machiChino-shiNe	aganomken.	
	Latitude:35 58 N L	ongitude:138°.22'.E	Altitude:22300m.	
DATE:	Jan. 16 1972; T	ime:5.155 = Je	an15,2055 (GMT)	
DATA ON A	VALANCHE:		•	
Type (Intern	national classification):A4	B.1D.2:	E.2F.1	***********
***************************************		Orie	entation :North	••••••
Dimensions'				
Starting zon	e: Altitude:2,300m	Width:	Depth of fracture:	*********************
Avalanche p	eath: Length:50m.	Width:	Average slope:	***************
	ximum depth :(.3m)			
Causes				
Snow structu	ıre:	••••		
Weather (sno	owfall, wind, temperature):Cle	ar		
	nechanism (if known):			
	S AND DAMAGE:			
Number of pe	ersons killed:2	; injured:3	; rescued unharmed:	·
Damage to b	uildings (type, number, degree of	destruction):None:		,
Other damage	e (forests, communications, etc.):	:None		
	escue work, former history of ava			
Persons	skilledandinjuredwere	.mountaineers. Parties	bivouacingneart	nescene
Therex	asnuava.ranchedamageb	eiore		***************************************
•••••••	* ,			*******************
Attach photo	graphs and/or sketches if possib	le. *Please use metric s	ystem	
reporti	orm should be completed as soon ng centre, be sent, in duplicate, ing address:	as possible after the event an together with the correspondin	d, after checking by the a g annual avalanche repor	national t, to the
The D	irector,			
_	ment of Environmental Sciences,			
Unesc	o,		€ ₄ ÷	
	de Fontenoy, 7e (France)			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japon		Winter 1971/1972	Sea	rial No.:	2
Name and action for Dise	ddress of reporter: aster Preventi	Instituteon. Suyosh	of Snow and Ice St i-machi, Nagaoka-s	udies,Nation hi.,Niigatak	alResea	rch Center
LOCATION	Mt. Hōō. S	eitetsu-mac	or village, mountain area ni, Nirasaki-shi, ongitude:138.18.	Yamanashi-ken		
DATE:	Feb. 10 (?)	1972; T	me:	=	(GMT)
Type (Intern	NALANCHE:	tion):AQ	B. OCOD	2E.OF Orientation :	East	i
Dimensions						
Starting zon			Width:50m			
						·,
Deposit: Ma	aximum depth:	4m.	Volume:		•,•,•	
Causes						
Weather (sn	owfall, wind, temp	erature):				
CASUALTI	ES AND DAMAGE	:				
Number of p	ersons killed:	Q	; injured:0	; rescued (ınharmed :	
Damage to	buildings (type, nu	imber, degree of	destruction): Uninha	bited hut (co	mpletel	destroyed)
Other dama	ee (forests, commu	inications, etc.	:None			
REMARKS	(rescue work, form	er history of av	alanches, etc.)			
Mountai	neers found the	he hut destr etailed info	oyed by the Evalar gration on the eva	lanchecould.	.notbe	obtained
Attach pho	tographs and/or si	ketches if possi	ble. *Please use r	netric system		
repo	form should be corring centre, be se owing address:	ompleted as soo ent, in duplicate	n as possible after the e , together with the corre	vent and, after che sponding annual a	ecking by valanche r	the national eport, to the
Dep. Une	Director, artment of Environ sco, ce de Fontenoy,	mental Science	5,			
	s 7e (France)					

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 1971/1972	Serial No.:	3
Name and ad for Diss	dress of reporter: ster Prevent	Institute of Snow and Ice Studies, ionSuyoshi-machi, Nagaoka-shi, Nii	National Resea gata-ken	rch Center
LOCATION:	(Name of district	, nearest town or village, mountain area, avalanch	ie path) (gu	n, Tottori-ker
	Mt. Daisen	(the Taki-no-sawa Ridge of North Wal	l)Daisen-ma	chi, Saihaku-
		55°.23'.N Longitude:133°.33'.E Altit		
DATE:	Feb. 11	1972; Time: About 12 30 =3		
	VALANCHE:			
Type (Interna	ational classifica	tion):A. 1B. 2	0EQ	
Dimensions*			•	
Starting zone	:: Altitude;	About 1,700m Width:20-40m De	epth of fracture:	.0.4~0.5m
Avalanche pa	ath: Length:	1,200m Width:20~40m A	verage slope:	40°
		Volume:		
Causes				
Snow structu	re:New .snow	of 0.4~0.5m on the 2m old snow		
		erature):Clear, +3°C (at 3°GMT).		
Triggering m	echanism (if know	vn):Theairtemperatureofthedayv		
CASUALTIE	S AND DAMAGE:	by 4~5°C.		
Number of pe	rsons killed:		scued unharmed :	ο
Damage to bu	aildings (type, nu	mber, degree of destruction):None		
Other damage	e (forests, commu	nications, etc.):None	•••••	
		er history of avalanches, etc.)		
Six pers avalanche and quiel	sons were bur es occur at t c changes of	ied .underthedebrisandthreeperson he North Wall of Mt. Daisen, because weater.	of steepness of	of the slopes
	•••••	<u> </u>		••••••
Attach photo	graphs and/or sk	etches if possible. *Please use metric syste	e m	
reporti	orm should be conng centre, be sen	npleted as soon as possible after the event and, a t, in duplicate, together with the corresponding an	fter checking by the nual avalanche rep	e national ort, to the
The D	irector,			
_	ment of Environm	ental Sciences,	25	
	de Fontenoy,			
Paris	7e (France)			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

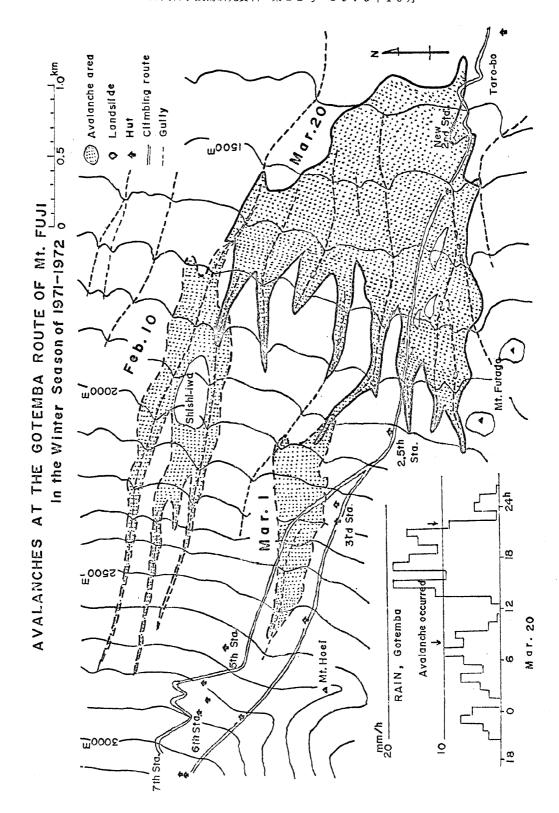
Department of Environmental Sciences

COUNTRY:	Japan	Winter 1971/19.72	Serial No.:	4
	dress of reporter:Institutec terPreventionSuyoshi			
	(Name of district, nearest town orMt. FujiNarusawa-mura	., Minami-tsuru-gun, Ya gitude:138°42'.E A	manashi-ken. Ititude:2,028	
DATE:	Feb. 16 1972.; Tim	e:About 7 =F	eb1522". (GMT)	
DATA ON AV				
Type (Interna	ational classification): .A4	B. 2C. 2 D. 1E	1.2F.2	
Dimensions*				
	: Altitude:3,200m	Width:20m	Depth of fracture:	ln
	ath: Length:2.,700m			
Deposit: Max	kimum depth:5m	Volume: 7,600m ³		
Causes	Ī			
	re: New snow on the cruste	ed snow cover.		
Weather (sno	wfall, wind, temperature):Glor	ndy, No. wind, -8 C~-7.	C.	
	echanism (if known):Rain			
CASUALTIE	S AND DAMAGE:			
Number of pe	rsons killed:	injured:	rescued unharmed:	0
Damage to be	uildings (type, number, degree of diclatrine(partlydestro	lestruction):Uninhabited	stall(completel	ydes.troyed),
Other damage	e (forests, communications, etc.):	.Forest 0.2 ha and fac	ilitiesofroad.	·
	escue work, former history of aval		•	
An avale	nche once occured about	70 years ago.		
				.,
Attach photo	grapus and/or sketches if possib	e. *Please use metric sy	ystem	
report	form should be completed as soon ing centre, be sent, in duplicate, ring address:	as possible after the event and together with the corresponding	d, after checking by the gannual avalanche rep	e national port, to the
Depai Unesc	•			
	de Fontenoy, 7e (France)			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 1971/19.72	Serial No.:	5
Name and ac	dress of reporter: Instituster PreventionSu	ıteofSnow.andIceStudies yoshi-machi,Nagaoka-shi,N	, National Resear iigata-ken.	ch Center
LOCATION	Mt. Fuji. Gotemba.	own or village, mountain area, avala -shi, Shizuoka-ken.		
	Latitude: 35°18 N	Longitude: 138°56' E	ltitude: 1,50	Om
DATE:	Mar. 20 1973	?; Time: 8 ^h 15 ^m = M	ar19,23,15(GMT)	
DATA ON A	VALANCHE:			
Type (Intern			E2 F2	
•••••		Orien	tation:South-ea	st
Dimensions*		000m 20 50		
Starting zone		,000m Width: 20~50m		•••••••••••••••••••••••••••••••••••••••
	•	000m Width: 1,600m	= •	•••••••••••••••••••••••••••••••
Deposit: Ma	ximum depth:	Volume:	***************************************	
Causes				
		n		
Weather (sno	wfall, wind, temperature):	Rain and fog, S 11.5m/sec	, +14.2°C (Mar. 2)	0, 00°00 GMT)
Triggering m				
CASUALTIE	S AND DAMAGE:			
Number of pe	rsons killed: 24	; injured:	rescued unharmed:	0
	ildings (type, number, degre	ee of destruction):None		******************
Other damage	e (forests, communications,	ecc.): .3.cars.at.the.parking	lot of the Cotem	ba ski field.
REMARKS (n Recent av Reference	escue work, former history o valanches at this are :.A.sketch of the ava .Gotemba route of Mt		0, 1972 ; Mar. 1, past avalanches a	.1972. .t. the
	graphs and/or sketches if po			
reporti	orm should be completed as a single centre, be sent, in duplicing address:	soon as possible after the event and ate, together with the corresponding	, after checking by the annual avalanche repo	national
The Di	rector			
Depart	ment of Environmental Scien	ces,		
Unesco Place	o, de Fontenoy,			
	e (France)			



PAST AVALANCHES AT THE GOTELEA ROUTE OF Mt. FUJI

eather Station 1)	Casualities and damage	power-transmission line						two huts of the 2.5th station			power-transmission line and	Oishi tea shop	
. Fuji	Casu	power-						two hu			power-	Oishi	
Reported by the Mt. Fuji Weather Station 1)	Time	about 18,30"	unknown	13h15, 13h45m	7" 8, 9,55, 11,10	unknown	6 ^h 20 m	unknown	unknown	5,16"	11440, 12410"	about 22h	
FAST AVAIMANCES AT THE GOLDWAN ACCULE OF ACT.	Location	from the 2nd station to Taro-bo	the 5th station		the 6.5th station				the 6th station	right side of climb-	ing route the 3rd station	the 2.8th station	
FAS	Date	Mar. 2, 1947	Apr. 2, 1947	Mar. 15, 1948	May, 13, 1949	Mar. 7, 1950	Mar. 26, 1951	Feb. 27-28, 1954	Mar. 18, 1955	Mar. 17, 1956	Mar. 19, 1956	Jan. 30, 1959	
	No.	1	2	8	4	2	. 9		8	6	10	17	

1) <u>Seppyo</u> Vol. 22, No. 1, 1960, p. 28-36.

2) Including the avalanches which had neither casualities nor damage.

UNITED NATIONS & DUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: J	apan	Winter 1971/19 72	Serial No.: 6
Name and address .for Disaster	of reporter: Institute of Prevention. Suyoshi-	f Snow and Ice Studies, 1 machi, Nagaoka-shi, Niig	ational Reseach Center
Mt.	. Asahi-dake. Yumoto,		e path) ochigi-ken. de:
		e:About 10 ^h =	
DATA ON AVALA		• • • • • • • • • • • • • • • • • • • •	(GMI)
		Bl C2 DO E	2 F 2
			on :
Dimensions*			
			pth of fracture:
Avalanche path: I	Length:150m	Width: 20m Av	erage slope:
Deposit: Maximum	depth :	Volume:	
Causes			
Snow structure:			
,			
CASUALTIES ANI			
		· ·	cued unharmed:1
Other damage (for	ests, communications, etc.): .	None	
REMARKS (rescue	work, former history of avala	nches. etc.)	
.The slope is .The Kuroiso did the rescue	said to be an avalance police party and the bactivities.	he site where we have ma Curoiso mountain rescue p	ny avalanches frequently. arty (total 23 persons)
***************************************	······································		
Attach photograph	s and/or sketches if possible	*Please use metric system	1
	entre, be sent, in duplicate, to	s possible after the event and, aft gether with the corresponding and	
The Directon Department Unesco,	or, of Environmental Sciences,		
Place de Fo Paris 7e (F	• •		

ANNUAL REPORT ON DESTRUCTIVE AVALANCHES UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION Department of Environmental Sciences

COUNTRY:	Janen	COUNTRY:Leger W1	Winter 1972/193	5.3		Sheet	Sheet No. 1
Name and	address o	Name and address of reporter: Institute of Snow and Ice Studies. Suyoshi-machi. Nameoka-shi. Ninnta-ken	Snow and Ic	e Studies	Suyoshi-mac	hi, Magaoka	-shi. Hiigata-ken
Serial mumber	Date	Location	Category*	Category* Number of Number of deaths injured	Number of injured	Damage	Remarks
-	Nov. 21	Nov. 21 43°09'3 143°31'E (jan-no-sawa, Hokkaido)	E-I	5	0	0	
2	Dec. 1	Dec. 1 36.13'N 157'57'E (Kama Tunnel, Nagano)	E	٦	0	0	
2	Jan. 1~	Jan. 1~2 36 18' 137' 40'E (Mt. Kitahodaka, Nagano)	€	4(missing)	0	0	
4	Jan. 29	Jan. 29 35°51'N 138°57'E (Ichi-no-kura-sawa, Gunra)	a) T	2(missing)	0	0	
· ·	May 17	May 17 37°18'N 139°13'E (Rolnijuri Pass, Fukushina	a) W	Н	П	0	

* For accident to tourists, mark T; to people at work, mark W; to residents, mark R; to communications (roads, railways), mark C.

This form should be completed in duplicate at the end of each winter season; and sent, together with the reports on individual avalanches, to the following address: Note:

The Director
Department of Environmental Sciences
Unesco
Place de Fontenoy
Paris 7e (FFANCE)

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 1972/19.73	Serial No.: 1
Name and a	ddress of reporter: sasterPreventic	Institute of Snow and Ice Studies on Suyoshi-machi, Nagaoka-shi, N	s. National Research Center Niigata-ken.
LOCATION	: (Name of district,	nearest town or village, mountain area, avala	nche nath)
		Mt. Daisetsu. Higashikawa machi.	
		09!N Longitude:143.31!E A	
DATE:	Nov. 21	1972; Time:About 23.h. =	14 h (GMT)
DATA ON A	VALANCHE:		
Type (Intern	national classification	on): A.2B.6C.2D.2E	E 2 F 2
		Orien	tation: North
Dimensions'			
Starting zon	e: Altitude:		Depth of fracture:
Avalanche p	oath: Length:	300m Width:40m	Average slope:25°
Deposit: Ma	ximum depth:	4m	
Causes			
Snow structi	ure:Wetsnowon	the new snow.	
		ature):Snowstorm,10m//sec,+9°.0	
		,	
Triggering m	nechanism (if known)):	
CASUALTIE	ES AND DAMAGE:		
		5; injured:	1 1 1/20000011
		er, degree of destruction):(Atentwas	himself)
		cations, etc.): None	
		history of avalanches, etc.)	47. 47
		r in the beginning of winter and	
••••••••••			
Attach photo	ographs and/or sketċ	thes if possible. *Please use metric sy	stem
report	form should be compling centre, be sent, it	leted as soon as possible after the event and, in duplicate, together with the corresponding	, after checking by the national annual avalanche report, to the
The D	irector,		
Depart	tment of Environmen	tal Sciences,	
Unesc	o, de Fontenoy,	•	
	7e (France)		

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan		Winter 1972/1	973	Serial No.: 2	
					ies, National Research Niigata-ken	
	Latitude:36.	on the Kamiko	ochi side.). gitude:13	Azumi—1 7°.37!E	machi, Minami-azumi-gu Altitude:l,400m	lan
DATE:	Dec. 1	1972; Tim	e:14 ^h .30) =	530 (GMT)	
DATA ON A	VALANCHE:					
Type (Intern	ational classificat	ion):AO	.B.1	D2	E 2 South-we	st
Dimensions*			••••••		rientation:South-we	***************************************
Starting zone		1,450m	Width:	7m	Depth of fracture:	2m
Avalanche p					Average slope:	
Causes	<u>, , , , , , , , , , , , , , , , , , , </u>					
	ıre :					
Weather (sno	owfall, wind, tempe	erature):Snow.	.storm			
	S AND DAMAGE:					
Number of p	ersons killed:	;	injured:	0	; rescued unharmed:	3
Damage to b	uildings (type, nu	mber, degree of d	estruction):l	Ione		
Other damag	e (forests, commu	ications, etc.):	None			
	rescue work, forme				mie memberg wog gtraiek	· by the
avallanche	····				gue members was struck	
In Hard	h 20, 1972, t	wo.persons.we	era.attacked	lbyane	avalanche.atthe.point	twenty
Attach photo	ographs and/or sk	etches if possibl	e. *Pleas	e use metri	c system	
report	form should be conting centre, be sen	npleted as soon a t, in duplicate, t	as possible afte ogether with the	r the event correspon	and, after checking by the niding annual avalanche report	ational , to the
Depar Unes Place	Director, rtment of Environn co, de Fontenoy, 7e (France)	ental Sciences,				

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 1972 / 1973	Serial No.: 3	
Name and add	ress of reporter: .Ir er Prevention.	nstituteofSnowandIceStud Suyoshi-machi,Nagaoka-shi,	ies, National Research Cente Niigata-ken.	2r
	the junction of	arest town or village, mountain area, a Yokoo-dani and Kara-sawa, N BN Longitude:137°40!E	It. Kita-hodaka. Minami-azum	
		19.73; Time:		••••••
DATA ON AVA			(OWI)	
Type (Internat	ional classification)	: A.OB.1C.2D.1	E.2. F.2	
		······································	rientation :	••••••
Dimensions*				
Starting zone:		Width:		• • • • • • • • • • • • • • • • • • • •
Avalanche pati	h: Length:		Average slope:	
Deposit: Maxin	mum depth:	Volume:		
Causes				
Snow structure	:			
Weather (snows	fall, wind, temperatu	re): .Rain and snow storm		
		Rain.		
CASUALTIES .	AND DAMAGE:			
Number of pers	ons killed: 4(mis	sing); injured:Q	: rescued unharmed:	
Damage to buil	dings (type, number,	degree of destruction): None		
Other damage (forests, communicati	ions, etc.):None		
				•••••
		tory of avalanches, etc.) the North Ridge of Mt. Kita-	landalar and the	
.struck at t	le point of 100r	n upward from Maruta Bridge.		
ineslope	aissaidtobe.	an avalanche site where we he buried alive here.	lave many avalanches frequent	±7.77
Attach photogra	phs and/or sketche	s if possible. *Please use metric	system	
reporting	should be complete centre, be sent, in a address:	ed as soon as possible after the event adupticate, together with the correspond	and, after checking by the national ing annual avalanche report, to the	
The Direc Departme Unesco,	ctor, nt of Environmental	Sciences,		
Place de Paris 7e	Fontenoy, (France)			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

	dress of reporter:		•
LOCATION:	rcn1-no-kurasav		Minakami-machi, Tone-gun, Gunma-ken
	Latitude: 35°51'N	Longitude: 138°57°E	Altitude: About 900 m
DATE: Jan.	• 29	19 73; Time: About 10h30m	01h30m (GMT)
DATA ON A	VALANCHE:	la De da nome	
Type (Interna	ational classification)	A0 B1 C1 D2 E0 F1	
			Orientation:
Dimensions*		50-60	·
Starting zone	:: Altitude:	Wicth:	Depth of fracture:
Avalanche pa	ath: Length: 600 m	Width:	Average slope:
Deposit: Max	ximum depth:	Volume:	
Causes Snow structure	About one met	er of new snow on the old s	now
	wfall, wind, temperatu		
Triggering m	echanism (if known): .		
CASUALTIES	S AND DAMAGE:		
Number of pe	rsons killed: 2(mi	ssing.); injured:0	; rescued unharmed: 4(escapedby.
		degree of destruction): None	
	······		
Other damage	e (forests, communicat	ions, etc.): None	
PEMARKS (n	escue work, former his	tory of avalanches, etc.)	
The case	of successive to	wo avalanches. The first	avalanche hit four persons
One of th	ree returned to	ask for help, while two pers	by themselves. sons stayed there, they were struck he other escaped by himself.
Attach photog	graphs and/or sketche	es if possible. *Please use met	ric system
reporti	orm should be completing centre, be sent, in ing address:	ed as soon as possible after the ever duplicate, together with the correspo	nt and, after checking by the national onding annual avalanche report, to the
Departi Unesco Place	rector, ment of Environmental o, de Fontenoy, Ve (France)	l Sciences,	·

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 1972/1973	Serial No. :	5
		Institute of Snow and Ice La. Suyoshi-machi, Nagaoka-		
LOCATION :	: (Name of district,	nearest town or village, mountain as	rea, avalanche path)	
		s, Mt. Oni-ga-tsura. Tadam		n,Fukushima.
	Latitude:37	18.1N Longitude:139°.13	IE Altitude: About .l,	000m
DATE:	May 17	1973; Time:About7 ^h 30 ^h .	= May16,22.35 (GMT)
	VALANCHE:			
		ion): <u>A. I</u> B. 4		
Dimensions*				***************************************
		oout-1,000m Width:31	Depth of fracture:	7m
		10m Width: 3		
_	ximum depth:	Volume:		
Causes				
			•	
		rature):Cloudy,lm/sec,+19.		
		n):		
CASUALTIE	S AND DAMAGE:			
Number of pe	ersons killed:	; injured:1	; rescued unharmed:	0
Damage to b	uildings (type, num	ber, degree of destruction): None		
		ications, etc.):None	,	
		ications, etc.).		
DEMARKS (.	raccus worls former	history of avalanches are \		
		r history of avalanches, etc.) .a.kind.of.mountain.plant.fo	or food.	
4.TO.0T.mc	_	· · · · · · · · · · · · · · · · · · ·		

Attach photo	ographs and/or ske	tches if possible. *Please use	metric system	
report		pleted as soon as possible after the , in duplicate, together with the corr		
Depar	irector, tment of Environme	ental Sciences,		
	o, de Fontenoy, 7e (France)			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULIURAL ORGANIZATION

ANNUAL REPORT ON DESTRUCTIVE AVAIANCHES Department of Environmental Sciences

COUNTRY Name an	COUNTRY: Japan Name and address of reporter:	f reporter	•	Winter 1973/1974 Sheet No. Institute of Snow and Ice Studies, NRCDP, Nagaoka-shi, Nigata-ken	374 se Studies,	NRCDP, Naga	Shee oka-shi, Nij	Sheet No. 1 gaoka-shi, Nilgata-ken
Serial number	Date	I	Location	Category* Number of deaths		Number of injured	Damage	Remarks
1000000000	21 Dec. 1 Jan. 12 Jan. 16 Jan. 24 Jan. 24 Jan. 24 Jan. 26 Jan. 28 Jan.	37°49°N 36°48°N 36°48°N 36°59°N 40°15°N 40°15°N 37°32°N 37°32°N	139°30°E 138°14°E 138°14°E 138°31°E 140°17°E 140°15°E 140°37°E 139°08°E	ЗННОЖЗНЖНО	0680041010	00000HH00	0 0 0 Euilding 0 Euilding 0 Euilding	Mountaineers Tour skiers
111	10 Feb. 10 Feb.	39°00°N 36°07°N	140°40°E 138°10°E	ద	0	01	c. Euilding O	Nursery school Tour skiers

* For accident to tourists, mark T; to people at work, mark W; to residents, mark R; to communications (roads, railways), mark C. Note: This form should be completed in duplicate at the end of each winter season; and sent, together with the reports on individual avalanches, to the following address:

The Director Department of Environmental Sciences

Unesco Place de Fontenoy Paris 7e (FRANCE)

ANNUAL REPORT ON DESTRUCTIVE AVALANCHES UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION Department of Environmental Sciences

COUNTRY:	dapan address o	COUNTRY: Capan Name and address of reporter:	W. Institute of	Winter 1973/1974 of Snow and Ice S	974 e Studies	•	Shee	COUNTRY: Caran Sheet No
Serial number	Date	Ι	Location	Category*	Category* Number of Number of deaths injured	Number of injured	Damage	Remarks
13	11 Feb.	35°59°N	138°21°E	H	3	0	0	Mountaineers
7,7	23 Fet.	36°30'N	137°43°E	;₃	0	7	0	
15	24 Fet.	36°05'N	138°12°E	₽	-	0	0	Tour skier
16	4 Mar.	34°13'N	136°38'E	7 & C	0	0	Road & car	
17	6 Mar.	40°20'N	140°45'E	æ	0	0	Euildings	
13	o Mar.	32,30.	139°44"E	æ	M	0	0	
19	16 Mar.	N. 772076	136°38'E	E-1	-	2	Motor car	
20	18 Mar.	134045'N	137°46'E	H	2	0	0	Mountaineers
21	22 Mar.	N.01.04	140°30°E	pH	0	0	Euildings	
22	23-24)	
	Mar.	36°35'N	137°45°E	T.	6	7	0	Mountaineers
23	25 Mar.	42°56'N	141°02'E	₽	. ~	0	0	Tour skiers
57	26 Mar.	39°23'N	139°27'E	3	-	0	0	
	_			_	_		_	

* For accident to tourists, mark T; to people at work, mark W; to residents, mark R; to communications (roads, railways), mark C.

This form should be completed in duplicate at the end of each winter season; and sent, together with the reports on individual avalanches, to the following address: Note:

Department of Environmental Sciences Unesco Place de Fontenoy Paris 7e (FRANCE) The Director

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULIUDAL ORGANIZATION Department of Environmental Sciences

ANNUAL REPORT ON DESTRUCTIVE AVAIANCHES

COUNTRY: Japan Sheet No. .3...... Name and address of reporter: Institute of Snow and Ice Studies Remarks Damage 00 Number of injured 40 Number of deaths 2 Category* ,≥ ⊱ 140°39'E 139°48'E Location 40°11°N 37°15°N 1 Apr. 8 Apr. Date Serial number 83

* For accident to tourists, mark T; to people at work, mark W; to residents, mark R; to communications (roads, railways), mark C. Note: This form should be completed in duplicate at the end of each winter season; and sent, together with the reports on individual avalanches, to the following address:

Department of Environmental Sciences The Director

Unesco Place de Fontenoy Paris 7e (FRANCE)

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNT	RY:	Japan		Winter	1973/1974	5	Serial No.	. 1	
Name ai	nd add ster	dress of re Frevent	Institute ion, Suyoshi-ma	of Snow chi, Naga	and Ice Stocka-shi, N	tudies, Nation iigata-ken	nal Rese	earch Center	for
			district, nearest tow						
		Mt. Tak	iya, Shibata-sh	i. Niigat	a-ken	•			
		Latitude :	37°49'N	Longitude:	139°30'E	Alrimde:	220 m		• • • • • • • • • • • • • • • • • • • •
DATE:			19.73						• • • • • • • • • • • • • • • • • • • •
DATA C	ON AV	'ALANCHI	E:						
Type (In	nterna	tional clas	ssification): A1 E	1 C1 D2 E	1 F0 G1				
			, ,			Orientation :	outh		
Dimensi	ons*								
Starting		: Altitud	le: 270 m	Width:	2 m	Depth of	fracture:	1 m	
Avalanci	he pa	th: Length	50 m	Width ·	9 m	A	-1	40°	•••••
			h: 3 m					***************************************	• • • • • • • • • • • • • • • • • • • •
Causes	· Mus.	тан асри		volume	:				
			С Т	lasr			•••••••••••••••••••••••••••••••••••••••		•••••
Weather	(snow	fall, wind.	, temperature):			•	•••••••	•••••	
Triggerin			f known):			•••••••••••••••	••••••	•••••	
CASUAL	TIES	AND DAM	MAGE:						
			d:Ò		2			^	
Damage 1	to bui	ldings (typ	pe, number, degree o	f destruction	ı):	N.one			·····
	mage	(forests, c	ommunications, etc.):	one				
REMARK Hit wh			former history of av		c.) ozer. Thir	rty workers	of mine	offi on which	
the sc	ene	did res	GRE MOLK.	••••••••••					
Attach pk	otogr	aphs and/	or sketches if possi			· ······	••••••		•••••
rep	oruni	m should b g centre, b g address :	oe completed as soon e sent, in duplicate,	n as possible together wi	e after the eventh the corresp	ent and, after che conding annual av	cking by t alanche re	he national	
De	e Dire partme		vironmental Sciences	,					
Pla	ace de	Fontenoy (France)	,						

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	vapan	Winter 1973/19.74	Serial No.: 2
Name and ad	dress of reporter:		
LOCATION:		lake) Ayasu-mura, Naka	lanche path) koma-gun, Yamanashi-ken Altitude: 3,100.m.
DATE:	Vanuary 1974;		
Type (Intern	VALANCHE: Al I	S1 C1 D2 E2 F0 G2	
		Orio	entation:South
Avalanche p Deposit: Ma Causes Snow structu	e: Altitude: 3,100 m	Width:	
Number of p	ES AND DAMAGE:	; injured:	; rescued unharmed:
Damage to b	ouildings (type, number, degree o	of destruction): None	
Orher damas	e (forests, communications, etc.): None	
	rescue work, former history of a	valanches, etc.)	
Attach phot	ographs and/or sketches if poss	ible. *Please use metric	
repor	form should be completed as soc ting centre, be sent, in duplicate wing address:	on as possible after the event a e, together with the correspond	and, after checking by the national ling annual avalanche report, to the
Depa Unes Plac	Director, rtment of Environmental Science ico, e de Fontenoy, s 7e (France)	es,	,

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 19.73 19.74	Serial No.:	3
Name and ac	dress of reporter:			
LOCATION:	Mt.Kurohime(n	rest town or village, mountain area, avala ear Kurohime skiing ground) S Longitude: 138°08'E	hinano-machi. Kami	i-minochi-gu Nagano-ke
DATE 12 J		19.74, Time: 12h45m = 3		* * * * * * * * * * * * * * * * * * * *
	VALANCHE: ational classification):	Al Bl Cl D2 E0 F0 G1		
Type (Intern	acional classification):	Orien	totion:	
Dimensions*				
Starting zone	e: Altitude:	00. m. Width:	Depth of fracture:	- 400 Min Ma Ma Ma Ma Ma
Avalanche pa	ath: Length:30	00 m Width:	Average slope	37°
		Volume:		
Causes		Volume:		
	re:			
		e). Clear		
			•••••	······
Triggering m	echanism (if known):	50 to 10 to	•••••	
	S AND DAMAGE:			
Number of pe	ersons killed:2	; injured: 0	rescued unharmed:	0
Damage to bu	uildings (type, number,	degree of destruction):		
		ons, etc.): None		

REMARKS (re		ory of avalanches, etc.)		
•••••				
Attach photog	graphs and/or sketches	if possible. *Please use metric sys	stem	
reportii	orm should be completed ng centre, be sent, in d ng address:	d as soon as possible after the event and, uplicate, together with the corresponding	after checking by the annual avalanche repo	national rt, to the
Unesco	ment of Environmental	Sciences,		
	de Fontenoy, 'e (France)			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan		Winter 19	73/19.74	Seria	l No. :
	-	ter;				
	Tarusaka.	Sakae-mura.	Shimo-mir	ochi-gun.	a, avalanche path) Nagano-ken	320 m
DATE: 16	January	1974;	Time: 7h40)m	= 15 January 22h40m	(GMT)
DATA ON AV	VAL ANCHE				LLITTOM	
		ication):AO	FO CO DO	EO FO	GO	
					Orientation:	****
Dimensions*						
Starting zone	· Altinude ·	340 m	Width .	15 m	Depth of frag	ture:
Avalanche pa	ith: Length:	20 11	Width:	300 -3	Average slo	70°
Deposit: Max	cimum depth:	oler den dan sin vall der die	Volume	:		••••
Causes						
Snow structur	re: Snow d	epth; about	3 m			
Weather (sno	urfall wind to	em persture):				
Triggering me	echanism (if k	nown):				
		,				
	S AND DAMAG			•		0
Number of pe	rsons killed:	0	; injured:		; rescued unh	armed:
Damage to bu	ildings (type,	number, degree	of destruction):No	one	
Other damage	e (forests, con	munications, et			ed railway and	
derailed	by the der	osit				
DEMARKS (avalanahaa a	·~ \		
KEMAKKS (R	escue work, it	ormer history of				
Attach photog	graphs and/o	sketches if pos	ssible. *	Please use n	netric system	
reporti	orm should being centre, being address:	completed as so sent, in duplica	oon as possibl te, together wi	e after the e	vent and, after check sponding annual avala	ing by the national inche report, to the
Depart Unesce Place	o, de Fontenoy,	onmental Scienc	es,			
Paris '	7e (France)					

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: Japan	Winter 1973/19.74	Serial No.: 5
Name and address of reporter:		
LOCATION: (Name of district, neare Shimizusawa-mura,	st town or village, mountain area, aval Chokai-machi, Yuri-gun, Akita	lanche path) a≁ken
Latitude: 39°09'N	Longitude: 140°17°E	Altaude: 300m
	97^{1+} ; Time: $3h00m = 2$	23 January (GMT) 18hoom
DATA ON AVALANCHE:	A2 B1 C1 D1 / F1 F0 (30
l ype (International classification):	A2 B1 C1 D1	South-west
Dimensions*		
Starting zone: Altitude: 400 m	Width:50m.	Depth of fracture:1m.
Avalanche path: Length: 150 m	Width: 50 m	Average slope:35°
Deposit: Maximum depth: 3 m	Volume: 1,000 m ³	Average slope:35°
Causes		
	d snow cover	
		emperature; -2.1°c
weather (showing, wind, temperature)		
Triggering mechanism (if known):		
CASUALTIES AND DAMAGE:		
	injured:	; rescued unharmed:
-	egree of destruction):	
Damage to buildings (type, number, d	egree of destruction):	
Other damage (forests, communication	ns, etc.): None	-
•		
REMARKS (rescue work, former histo	ry of avalanches, etc.)	
		·····
Attach photographs and/or sketches	if possible. *Please use metric	system
	as soon as possible after the event an uplicate, together with the corresponding	
The Director, Department of Environmental S Unesco, Place de Fontenoy,	cciences,	
Paris 7e (France)		

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan		Winter 19.73 19	74	Serial No.:	6
Name and ad	dress of reporter	r:				· · · · · · · · · · · · · · · · · · ·
	National for Latitude: 40°	orest in Mt 15'N	n or village, mounta Shibauchi, Kaz Longitude: ^{140°5} Time: 11h30m	uno-shi, A	kita-ken	••••••
DATA ON AT	VALANCHE.				(,
Type (Interna	ational classific	ation): A2	E1 C1 D2 E1	FO G1	tion: East	
	e: Altitude:	60 m	Width: 13 m		Average slope: .	0•3 m 40°
Causes	***********		Volume: 1,0			5°C
CASUALTIE	echanism (if kno S AND DAMAGE	:	; injured:	.2 ; ;	rescued unharmed:	o
Damage to bu	uildings (type, n	umber, degree (of destruction):	None		
			None			
REMARKS (re	escue work, form	ner history of a	valanches, etc.)			
Attach photo,	graphs and/or sl	ketch e s if poss	ible. *Please	use metric sys	tem	
reporti			on as possible after e, together with the			
Depart Unesco Place	irector, ment of Environ o, de Fontenoy, 7e (France)	mental Science	s,			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 1973/1974	Serial No.:	7
Name and ad	dress of reporter:			
LOCATION:	(Name of district, nearest town Kashige, Fujisato-machi Latitude: 40°17'N L	Yamamoto-gun. Akita	-ken	
DATE. 21				
DATE:29.	January 1974; T	ime: .12h05m =	03ho5m(GMT)	•
DATA ON AV	VALANCHE:	a		
	ational classification): A2 Ed	+ C2 D1 E2 F0 G2		
***************************************		Or	ientation: Last	
Dimensions* Starting zone Avalanche pa	: Altitude: 250 m	Width: 230 m	Depth of fracture:	0.5 m
	cimum depth: 5 m			•
Causes Snow structur	Granular snow through the state of the state	gh all layer		
	wiall, wind, temperature):	, , , , , , , , , , , , , , , , , , ,	cemperature; -1.0	
		temperature		
Number of pe	S AND DAMAGE: 1 rsons killed:		; rescued unharmed: .	0
Other damage	(forests, communications, etc.)	None		
	escue work, former history of ava persons.working.atSuba		vered the victim of	dead
Attach photog	graphs and/or sketches if possib	le. *Please use metric	system	
reportir	orm should be completed as soon ng centre, be sent, in duplicate, ng address:	as possible after the event a together with the correspond	and, after checking by the ing annual avalanche rep	e national ort, to the
Unesco Place d	nent of Environmental Sciences,			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 19	73/19.74	Serial No.:	8
	ldress of reporter:				
	· (Name of district no	earest town or village, m	ountain area, a , Akita-ker	valanche path)	
	Latitude: 39°18"	Longitude:	140°37 ' E	Altitude: 140 m	
DATE: ²				13h30m (GMT)	
	VALANCHE:				
Type (Intern	ational classification	i): A2 E1 C1	D2 E2 F0 C	i2	
			o	rientation: North-wes	
Dimensions*					_
Starting zon	e: Altitude: 220	m Width: .	40 m	Depth of fracture:	1 m
Avalanche p	eath: Length: 150	m Width: .	50 m	Average slope:	39°
Danasit : Ma	vinum denth: 5 m	Volume:	7,500 m ³		
	iximum depui	7 0 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Causes					
Snow structi	ire:				or
Weather (sno	owfall, wind, tempera	ture): Snowlall, Wi	nd; 2 m/sec	, temperature; -1.3	
Triggering n	mechanism (if known)				
CACITAL TELL	CO AND DAMAGE.				
Number of p	ersons killed:	0 ; injured:	1	; rescued unharmed:	0
Damage to b	ouildings (type, numb	er, degree of destruction): One hear	vily destroyed	
	ge (forests, communic	None			
REMARKS (nistory of avalanches, et			
		••••••			
				······································	
Attach phot	ographs and/or sketc	thes if possible. *I	Please use metr	ic system	
repor	form should be completing centre, be sent, wing address:	eted as soon as possiblin duplicate, together wi	e after the even th the correspon	t and, after checking by t nding annual avalanche re	he national
Depa Unes	Director, rtment of Environment co, e de Fontenoy,	ital Sciences,			
	s 7e (France)				

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: Japan	Winter 1973/1974	Serial No. :	9
Name and address of reporter:			
LOCATION: (Name of district, nearest town Mt.Sankurobira, Nagano,	n or village, mountain area, a Shitada-mura, Minami	valanche path) -kanbara-gun, Niiga	ıta-ken
Latitude: 37°32'N			
DATE: 28 January 19 74			
DATA ON AVALANCHE:			
Type (International classification):	B1 C1 D1 E1 F0 G1		
	O	rientation: East	***************************************
Dimensions* Starting zone: Altitude: 155 m	Width: 30 m	Depth of fracture:	1 m
Avalanche path: Length: 60 m	Width 50 m	Average class.	′30°
Deposit: Maximum depth: 5 m			
Causes			
Snow structure: New snow on granula	r snow		
Weather (snowfall, wind, temperature):	udy, no wind		
Triggering mechanism (if known):			
CASUALTIES AND DAMAGE:			
Number of persons killed: 1	: injured: 0	· rescued unharmed	0
Damage to buildings (type, number, degree o	f destruction):	one	
Other damage (forests, communications, etc.):None		
REMARKS (rescue work, former history of av An avalanche occurred at the sa her way home.		s.agoThe victim.	is a pupil on
			•••••••••••
Attach photographs and/or sketches if possi	ible. *Please use metri	c system	
Note: This form should be completed as soo reporting centre, be sent, in duplicate following address:	n as possible after the event , together with the correspon	and, after checking by th ding annual avalanche rep	e national port, to the
The Director, Department of Environmental Sciences Unesco, Place de Fontenoy,	3,		
Paris 7e (France)			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan		Winter 19	73/1974	Serial No.:	10
	lress of reporte	er:				
LOCATION:	(Name of distr	ict, nearest town skiing ground 39'N		-mura. Kita-a	llanche path) zumi-gun, Nagano- Altitude: 970-1,09	ken. Om
DATE: 9 F				200m =	8 February (GM 23h00m	Γ)
DATA ON AV		. Ao B	1 C1 D2	El Fo Gl		
Type (Interna	tional classifi	cation):			entation: East	
•	th: Length:	1,400 m 1,100 m	Width: .	40-60 m	Depth of fracture: Average slope:	0.5-1 m 40°
Causes Snow structur		ow more than 1				
Weather (snow	wfall, wind, te	mperature):	ow storm,	wind; averag	e 25 m/sec, max.	38 m/sec
Triggering me	echanism (if kr	Strong	wind			
CASUALTIES	S AND DAMAG	E:				
Number of pe	rsons killed: .	0	; injured:	0	; rescued unharmed:	O
Damage to bu	uildings (type,	number, degree of	destruction): Operation	house for ski lif	t completely
Other damage	e (forests, com	munications, etc.	Suppo	orting struct	ures of the ski	lift
		ormer history of av				
Attach photo	graphs and/or	sketches if possi	ble. *I	Please use metric	system	
Note: This for	orm should be	completed as soo	n as possibl	e after the event : th the correspond	and, after checking by ing annual avalanche i	the national
Depart Unesc Place		onmental Sciences	s,			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 1973/19.74	Serial No.: 11	
Name and ad	dress of reporter:			•••
				•••••
LOCATION:	(Name of district, neares Katsurasawa, Mina	t town or village, mountain area, avala se-mura, Ogachi-gun, Akita-ko	nnche path) en	
	Latitude: 39°00'N	Longitude: 140°40°E	ltitude: 340 m	
DATE: 10	February 19	74; Time: 6h35m = 9 I	ebruary (GMT)	
			n35m	
	VALANCHE:	Al B4 C2 D1 E2 F0 G2		
Type (Intern		Orien		•••••
Dimensions*				•••••
Starting zone			Depth of fracture: 1 m	
	ath: Length: 150 m	Width: 50 m	Aver 37°	•••••
		Volume: 12,000 m ³		•
	kimum depth :	Volume:L&s.VVVm	•••••••	
Causes	New coors on al	3		
		d snow cover		••••
	echanism (if known):			•••••
CASUALTIE	S AND DAMAGE:			
Number of pe	rsons killed:	; injured:	rescued unharmed:0	
		One nursery	rechant commission of a second	ď
		gree or destruction):		
Other damage	(forests, communications	None		····
REMARKS (r	escue work, former history	of avalanches, etc.)		

				·····

Attach photo	graphs and/or sketches if	possible. *Please use metric sy	rstem	
reporti	orm should be completed a ng centre, be sent, in dup ing address:	as soon as possible after the event and licate, together with the corresponding	i, after checking by the national gannual avalanche report, to the	
The Di	rector,			
Depart	ment of Environmental Sc	iences,		
Unesco Place	o, de Fontenoy,			
Paris 7	e (France)			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: Japan	Winter 1973/19.74	Serial No.: 12
Name and address of reporter:		
LOCATION: (Name of district, nearest to The Kirigamine Height	s, Wada-mura, Chiisagat	a-gun, Nagano-ken
DATE: 10 February 1974;	Time: 16h00m = 1	Altitude: 1,700 m 7h00m (GMT)
DATA ON AVALANCHE: Type (International classification): A0		ientation:
Dimensions*	-	
Starting zone: Altitude: 1,600 m		
Avalanche path: Length:	Vidth:	Average slope:
Deposit: Maximum depth:	Volume:	
Causes		
Snow structure:		
Weather (snowfall, wind, temperature):		
Triggering mechanism (if known):		
CASUALTIES AND DAMAGE: Number of persons killed:	; injured:1	; rescued unharmed:0
Damage to buildings (type, number, degree		
Other damage (forests, communications, e		
REMARKS (rescue work, former history of	avalauches, etc.)	
Attach photographs and/or sketches if po	ssible. *Please use metric	: system
Note: This form should be completed as s reporting centre, be sent, in duplica following address:	-	and, after checking by the national ling annual avalanche report, to the
The Director, Department of Environmental Scien Unesco, Place de Fontenoy, Paris 7e (France)	ces,	

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter 19.73 19.74	Serial No.: 13
Name and add	lress of reporter	::	
	(Name of districe Mt. Yoko-dak Latitude: 35°	et, nearest town of village, mountain area, at the (Yatsugatake mountain range), 59'N Longitude: 138°21'E	Chino-shi Nagano-kan
DATE: 11		1974; Time:08b30m =	10.February (GMT) 23h30m
	numene: tional classifica	arian). AO B1 C1 D2 E1FO G1	
		OrOr	ientation:
Dimensions* Starting zone:			Depth of fracture:
		Width:	
Deposit: Maxi	mum depth:	Volume:	
Weather (snow		Fog, temperature; bel	ow -10°C
		wn):	
Number of pers	ldings (type, nu	3; injured: 0	9
Other damage ((forests, commu	nications, etc.):	
		er history of avalanches, etc.)	
Attach photogra	aphs and/or sk	etches if possible. *Please use metric	system
reporting	m should be con g centre, be sen g address:	inpleted as soon as possible after the event a t, in duplicate, together with the correspond	and, after checking by the national ing annual avalanche report, to the
Unesco, Place de		nental Sciences,	

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: Japan	Winter 1973/19.74	Serial No.:	14
Name and address of reporter:			
LOCATION: (Name of district, neares Site of constructi Latitude: 36°30'N 23 February DATE: 19 DATA ON AVALANCHE: Type (International classification):	Longitude: 137°43'E 7'4; Time: 08h40m = A0 E0 C0 D0 E0 F0 G0	Altitude:	
Dimensions*			
Avalanche path: Length: 15 m		Average slope:	
Deposit: Maximum depth:	Volume:		
Causes Snow structure:			
Weather (snowfall, wind, temperature)			
Triggering mechanism (if known):			
CASUALTIES AND DAMAGE:			
Number of persons killed:	egree of destruction):	one	
Other damage (forests, communication	ns, ecc.): None		
REMARKS (rescue work, former histo			
Attach photographs and/or sketches	if possible. *Please use me	tric system	
Note: This form should be completed reporting centre, be sent, in du foilowing address:	as soon as possible after the ever aplicate, together with the corresp	nt and, after checking by the onding annual avalanche re	ne national port, to the
The Director, Department of Environmental S Unesco, Place de Fontenoy, Paris Je (France)	Sciences,		

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	^J apan	Winter 1973/19 ⁷⁴	Serial No. :	15
Name and ac	ddress of reporter:			
	Mt. Kuruma skii Latitude: 36°05'N	arest town or village, mountain area ngground,	zano-ken	
		19; Time:	= 06h30m (GMT)	
	VALANCHE: ational classification)	A0 B1 C0 D2 E0 F0 G0		
			Orientarion:	
Avalanche p	ath: Length:	00 m Width: 50 m	Average slope:	1 m
Causes				
Snow structu	re :			····
	wfall, wind, temperatur			
Triggering m				
Number of pe		; injured:0		o
Damage to bu	ııldıngs (type, number,	degree of destruction):	one	•••••••••••
Other damage	(forests, communicati	ons, etc.):		
	escue work, former hist	tory of avalanches, etc.)	<u>.</u>	
Note: This fo	orm should be complete	d as soon as possible after the even	nt and after checking by the	national
followi	ng address:	duplicate, together with the correspondent	onding annual avalanche repor	t, to the
Unesco Place d	ment of Environmental	Sciences,		

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Department of Environmental Sciences

COUNTRY:	Japan		Winter 1973	3/19. 7 4	s	erial No.:	16
Name and ad	dress of report	er:					
LOCATION:	(Name of dist	rict, nearest too guchi-machi	wn or village, mo , Ishikawa-g	untain area, a un, Ishikat	valanche path w a-ke n)	
			Longitude: 1				
DATE:			Time: 17h30m				
DATA ON A	VALANCHE:						
Type (Intern	ational classif	ication): A2	B4 C1 D1 E	2 F0 G2		T.T 4	••••••••
				0	Irientation:	West	
Dimensions*							
Starting zone	e: Altitude:	400 m	Width:	20 m	Depth of	fracture:	
Avalanche p	ath: Length:	70 m	\ idth :	20-30 m	Average	slope:	45°
Danasit: Ma	vimum denth :	40 m	Width: Vidth: Volume:	500 m	3		
Deposit. Ma	ximum depui.		Volume .				
			63 cm				
Snow structu	ire :		ompone tunos	+5°C a+ 161	η Λ Λ η m		
Weather (sno	owfall, wind, to	emperature):	emperature;	. 5 0 at 101	ioon		
Triggering m	nechanism (if k	nown):	***************************************	*****			
CASUALTIE	ES AND DAMAG	GE:					
Number of p	ersons killed:	0	; injured:	0	; rescued	unharmed :	0
			e of destruction):				
Damage to b		degree					
Other damag	e (forests, con	nmunications, e	Road b	locked and	one motor	car damag	ed
					,		
DEMARKS /	rescue mork fo	ormer history of	avalanches, etc.)			
			t no rescue		e		
Attach photo	ographs and/o	sketches if po	ssible. *Pl	ease use metr	ic system		
Note: This	form should be	completed as s	soon as possible	after the even	t and, after cl	neckine by t	he national
report	ting centre, be	sent, in duplica	ate, together with	the correspon	nding annual	avalanche re	port, to the
	wing address:						
The I	Director,						
		ronmental Scien	ces,				
Unes	co,			1			-
	e de Fontenoy, 7e (France)						

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	J apa n		Winter 19	73 /19. 7 4	Secial No. :	17
Name and ad	ldress of repor	ter;				
LOCATION:	(Name of dist Tsukushim	trict, nearest too	wn or village, m machi, Kazu	ountain area, n o-gu n, Ak:	avalanche path) L ta-ke n	
	Latitude:				Altitude: 80 m	
DATE:	March	19 ⁷⁴ ;				
	VALANCHE:					
		ication); A2				
				1	Orientation: <u>East</u>	
Dimensions*		180 m	mul 1 4	30 m		-
Starting zone		100 m	Width:	30 m	Depth of fracture:	
	ath: Length:				Average slope:	35 -
Deposit: Ma:	ximum depth:	3 m	Volume:	3,000 m	6.3	
Causes	G3					
		emperature):			rature: -1.2°C	
		nown):				
	S AND DAMAG					
Number of pe	rsons killed:	0	; injured:	0	; rescued unharmed:	. 0
Damage to bu	ildings (type,		of destruction)	2; one c	ompletely destroyed	
		munications, et				
	••••••					•••••
REMA RKS (re	escue work, fo	rmer history of	avalanches, etc.	.)		
	•••••••••••••••••••••••••••••••••••••••			******************		·····
						•••••••••••••••••••••••••••••••••••••••
Attach photog	graphs and/or	sketches if pos	sible. *Pl	ease use metr	ic system	
reporti	orm should be ng centre, be s ng address:	completed as so sent, in duplicat	oon as possible te, together with	after the even the correspon	t and, after checking by the ding annual avalanche re	he national port, to the
The Di	rector,					
		onmental Science	es,			
Unesco Place o	de Fontenoy,					
	'e (France)					

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: Japan	Winter 1973/1974	Serial No.: 18
Name and address of reporter:		
LOCATION: (Name of district, neares Yanazu-machi, Kewe	numa-gun, Fukushima-ken	
		Altitude: 750 m
DATE: 9 March 1	974; Time: 10h00m =	01h00m (GMT)
DATA ON AVALANCHE:	AT DE CO DO TO TO	_
Type (International classification): .		South
	Orio	entation:
Dimensions*	·	
Starting zone: Altitude:750	n	Depth of fracture: .0.5.m-2.m
Avalanche path: Length: 50 r	n Width: 30 m	Average slope: 30°
Deposit: Maximum depth: 3 m	Volume: 4,500 m ³	
Causes		
weather (showtart, wind, temperature)		
Triggering mechanism (if known):		
CASUALTIES AND DAMAGE:		
Number of persons killed:	injured:	; rescued unharmed:0
Damage to buildings (type, number, d	egree of destruction):	
Other damage (forests, communication		
Other damage (forests, Communication		
REMARKS (rescue work, former histo	ry of a alanches etc.)	
Attach photographs and/or sketches	if possible. *Please use metric	system
Note: This form should be completed reporting centre, be sent, in defollowing address:	as soon as possible after the event a uplicate, together with the correspond	and, after checking by the national ing annual avalanche report, to the
The Director,		
Department of Environmental S	Sciences,	•
Unesco,		
Place de Fontenoy, Paris 7e (France)	\$	

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan		Winter 19.	73 19 74	Serial No. :	19
Name and ad	dress of repor	:er:				
LOCATION:	Nakajima,	rict, nearest town Tsurugi-machi 36°24'N	. Ishikawa	-gun Ishil	alanche path) (awa-ken 150 m	
DATE:					.08h05(GM	
DATA ON A	VALANCHE:					
	ational classif	ication): Al	B4 C1 D1	E2 F0 G2	·····	
***************************************	******************	•••••••••••••••••••••••••••••••••••••••		Or	ientation: South	***************************************
	ath: Length: .	150 m	Width:	10 m	Depth of fracture: Average slope:	45°
Causes						
Snow structu	re:Sno	w-depth;145-c	M	·····		
Weather (sno	wfall, wind, te	mperature):			••••••	
Triggering m	echanism (if k	nown):	-			••••••
Number of pe		1 number, degree o		None	; rescued unharmed	0
Other damage h eavily	e (forests, com	munications, etc.): One mot	or car in	which victims wer	eriding.was
REMARKS (re. . There i	escue work, fo	rmer history of av	alanches, etc.)	the road, but no	
		•••••••••••••••••••••••••••••••••••••••		••••••••		······································
						·····
Attach photog	graphs and/or	sketches if possi	ble. *Pl	ease use metric	system	
reporti	orm should be ng centre, be s ng address:	completed as soon sent, in duplicate,	n as possible , together with	after the event a the correspond	and, after checking by ing annual avalanche r	the national eport, to the
Unesco Place	ment of Enviro	onmental Sciences	,			

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: Ja	npan	Winter 1973/1974	Serial No.: 20
Name and addre	ss of reporter:		
1	ame of district, nearest town or Mt.Hakuba,Hakuba-mura,	Kita-azumi-gun, Nags	no-ken
			Altitude: 2,400 m
DATE: 18Mg	arch 19.74; Tim	e: =	23h00m (GMT)
DATA ON AVA	nal classification):	C1 D2 E2 F1 G0	
		Or	ientation: East.
			Depth of fracture:
Avalanche path	: Length: 500-600 m	Width: 300 m	Average slope:
Deposit: Maxim	num depth:	Volume:	
Causes			
Snow structure:			
Weather (snowfa	all, wind, temperature):	哪带哪	
	nanism (if known):	~~	
CASUALTIES A	AND DAMAGE: ons killed:	injured:	; rescued unharmed:0
Damage to build	dings (type, number, degree of d	estruction): Nor	nee
Other damage (forests, communications, etc.):	None	
REMARKS (res	cue work, former history of aval		,
Attach photogra	aphs and/or sketches if possibl	e. *Please use metri	c system
reporting	m should be completed as soon g centre, be sent, in duplicate, t g adcress:	as possible after the event ogether with the correspon	and, after checking by the national ding annual avalanche report, to the
Unesco, Place de	ector ent of Environmental Sciences, e Fontenoy, (France)		

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: Japan	Winter 1973/1974	Serial No.: 21
Name and address of reporter:		
LOCATION: (Name of district, near	est town or village, mountain area, aval	anche path)
Mt. Iwanosawa. Yuz	awa-shi. Akite-ken	-
Latitude: 40°10°N	Longitude: 140°30°E	Altitude: 120 m
DATE: 22 March	1974; Time: 10h00m =	01h00m(GMT)
DATA ON AVALANCHE:		
Type (International classification):	A2 B4 C2 D1 E2 F0 G2	
	Orie	ntation: West
Dimensions*		
Starting zone: Altitude:	m Width: 20 m	Depth of fracture: 1 m
Avalanche path: Length: 60 m	Width:20 m.	Average slope:380
	Volume: 2,400 m ³	
Causes		
Snow structure: Granular snow	w through all layer	
		erature; -0.2°C
Triggering mechanism (if known):	Climax avalanche	
CASUALTIES AND DAMAGE:		
Number of persons killed:) ; injured:0	; rescued unharmed:
Damage to buildings (type, number, d		etely destroyed and another heavi
REMARKS (rescue work, former histo	reat, the people of eleven ha	mes of the town were ordered
Attach photographs and/or sketches	if possible. *Please use metric s	ystem
Note: This form should be completed reporting centre, be sent, in du following address:	as soon as possible after the event and applicate, together with the corresponding	d, after checking by the national g annual avalanche report, to the
The Director, Department of Environmental S	Sciences,	
Unesco, Place de Fontenoy,		
Paris 7e (France)		

ÜNİTED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: Japan	Winter 19. 73 19. 7 4	Serial No.: 22
Name and address of reporter:		
LOCATION: (Name of district, neared Mt. Kashimayariga-ta	st town or village, mountain area, avala ke , Omachi-shi, Nagano-ken	anche path)
	Longitude: 137°45°E	
DATE: 23-24 March 1	74; Time: unknown =	(GMT)
DATA ON AVAI ANCHE		
Type (International classification):	AO B4 CO D2 EO FOO GO	
······································	Orier	itation:
Dimensions*		
	Width:	
	Width:	•
Deposit: Maximum depth:	Volume:	
Causes		
Snow structure:		
Weather (snowfall, wind, temperature)		
Triggering mechanism (if known):		
CASUALTIES AND DAMAGE:		
Number of persons killed:	; injured:2	rescued unbarmed . 0
Damage to buildings (type, number, do	gree of destruction):	
	s, etc.): None	
REMARKS (rescue work, former histor	y of avalanches, etc.)	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
		· · · · · · · · · · · · · · · · · · ·
Attach photographs and/or sketches i	f possible. *Please use metric s	ystem
	as soon as possible after the event an plicate, together with the corresponding	
The Director,		•
Department of Environmental S	ciences,	
Unesco, Place de Fontenoy,		
Paris 7e (France)		

UNITED NATIONS EDUCATIONAL.
SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY: Japan		
COUNTRY: Japan	Winter 1973/1974	Serial No.: 23
Name and address of reporter:		
LOCATION OF AN A		
Mt. Muine dozenh	est town or village, mountain area, ave	lanche path)
130EKIN	ei, Sapporo-shi, Hokkaido	
DATE. 25 March	Longitude: 141 02 E	Altitude:1,130 m
DATE: 25 Farch	19.74 Time: About 16h00m =	07h00m (GMT)
DATA ON AVALANCHE:		•
Type (International classification):	A2 B1 C1 D2 E2 F0 G1	
	Orio	entation: South-east
Dimensions*		
Starting zone: Altitude:	.m. Width: 50. m.	Denth of fractures A h
Avalanche path: Length: 200	m Width: 50 m	ilao
Deposit: Maximum depth: 3		
	M Volume:	
New snow on cm	st of snow cover	
Weather (snowfall, wind, temperature)	. Clear, no wind	****
		•••••
Triggering mechanism (if known):	Accidental triggering by ski	ers
CASUALTIES AND DAMAGE:		
		•
Number of persons killed:2		; rescued unharmed : 0
Damage to buildings (type, number, de	egree of destruction):	
	Nama	
Other damage (forests, communication	s, etc.):	
REMARKS (rescue work, former histor	y of avalanches, etc.)	
Attach photographs and/or sketches is	f possible. *Please use metric s	ystem
•		
Note: This form should be completed a	as soon as possible after the event an	d, after checking by the national
following address:	olicate, together with the correspondin	g annual avalanche report, to the
The Director, Department of Environmental Sc	·	
Unesco,	iences,	
Place de Fontenoy,		
Paris 7e (France)		

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNTRY:	Japan	Winter	1973/1974	Serial No.:	24
Name and ad	ldress of reporter:	and the second s			
LOCATION:	Tadami-machi, M		ıkushima-ken	- 	
	Latitude: 39°23	N Longitude:	139°27°E	Altitude: 370m	•
DATE:26	march	1974; Time: 091	140m =	00h40m (GM	Γ)
DATA ON A	VALANCHE:	As Es de De F	e Pa Ca		
Type (Intern	ational classification):	52 FO G2	South-ea:	* †
	***************************************		(Orientation:	
Dimensions*					
Starting zone		,		Depth of fracture:	
Avalanche p	ath: Length:	60 m Width:	10 m	Average slope:	456
Deposit: Ma	ximum depth :5=6.	mVolum	e:3,000 - 3,5	00. m ³	
Causes					
Snow structu		•			
				perature; #5-10°C	
	nechanism (if known):				
CASHALTIE	ES AND DAMAGE:				
		l injured	. 0	; rescued unharmed:	. 0
number of pe	ersons kined:	, injured	Non	8	
Damage to b	uildings (type, numbe	r, degree of destruction	on):		
Other damag	e (forests, communica	ations, etc.):	None		
REMARKS (rescue work, former h	istory of avalanches, ofore and the sno	etc.)	onstructed there	
Attach photo	ographs and/or sketch	nes if possible.	*Please use met	ric system	
report	form should be completing centre, be sent, in wing address:	eted as soon as possil n duplicate, together	ble after the ever with the correspo	nt and, after checking by inding annual avalanche s	the national report, to the
Depar Unesc Place	Director, ttment of Environment co, de Fontenoy, 7e (France)	tal Sciences,	t .		

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION .

Department of Environmental Sciences

COUNTRY: Japan	Winter 19 73 /19.74	Serial No.: 25
Name and address of reporter:		
Takonaitaira, Hi	urest town or village, mountain area, aval igashi-naruse-mura, Ogachi-gun,	Akita-ken
Latitude:	Lorgitude: 140°39°E	
DATE: 1 April	19^{74} ; Time: 13h50m = 0	44h50m (GMT)
DATA ON AVALANCHE:		
Type (International classification)	A2 B4 C2 D1 E2 F0 G2	N41
	Orie	ntotion:
Diviensions*		
Starting zone: Altitude: 300	m Width: 100 m	. Depth of fracture:2.m
) m Width: 100 m	
	5m. Volume: .20,000 m ³	-
	voiume:	
Causes	- Ab	
	through all layer	
Weather (snowfall, wind, temperatur	re): Clear, wind; 1 m/sec, temp	erature; +5.3°C
	Warm weather and rain falling	from the day before
CASUALTIES AND DAMAGE:		
Number of persons killed:	; injured:1	rescued unharmed 0
Descriptions which the second second	None	, rescued dimutines.
Damage to buildings (type, number,	degree of destruction):	
	ions, etc.): None	
REMARKS (rescue work, former his Wood cutters while bring	ing down timbers were hit	
Attach photographs and/or sketche	es if possible. *Please use metric s	system
	ed as soon as possible after the event ar duplicate, together with the corresponding	
The Director, Department of Environmenta Unesco, Place de Fontenoy, Paris 7e (France)	l Sciences,	
Tans / C (Plance)		

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

Department of Environmental Sciences

COUNT	RY: Japan	Winter 19.73 1974	Serial No. : 26
Name a			
LOCAT	Kurakotsu-sawa, Shimo	town or village, mountain area, av ogo-machi, Minamiaizu-gun,	Fukushima-ken
	Latitude: 37°15°N	Longitude: 139°48'E	Altitude: 650 m
DATE:	8 April 197	74; Time: .09h30m-11h30m =	.00h30m-02h30m (GMT)
	ON-AVALANCHE: nternational classification):	A1 B1 C1 D2 E2 F0 G2	ientation: Bast
Dimens Starting		Width:	Depth of fracture:l.o1.5m
	•		Average slope: '60°
	•		
Deposi	t: Maximum depth:		0.00
Causes	The state of the s		
		Clear, weak wind	
Trigger	ing mechanism (if known):	ow cornice	
CASUA	LTIES AND DAMAGE:		
	_	; injured:0	; rescued unharmed:0
Damage	to buildings (type, number, deg	ree of destruction): None	
Other o	amage (forests, communications,	, etc.):	
REMAR Fre	LKS (rescue work, former history quent avalanches at this	of avalanches, etc.)	·
			**
A: tach	photographs and/or sketches if	possible. *Please use metri	c system
1	This form should be completed as eporting centre, be sent, in duplible ollowing address:	s soon as possible after the event licate, together with the correspon	and, after checking by the national ding annual avalanche report, to the
	The Director, Department of Environmental Sci Unesco, Place de Fontenoy,	ences,	
	Paris 7e (France)		