



Scottish Mountain Rescue

Glenmore, Aviemore, Inverness-shire PH22 1QU

'Volunteering to save lives'



Annual Statistics Report 2011





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Incident Report 2011

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The Mountain Rescue Committee of Scotland would like to thank the Scottish Government and the Order of St John for their continued commitment and financial assistance to Scottish Mountain Rescue.



Introduction

The data reported here has been collated by the MRCoFS Incident Reporting System, which was initiated in 2010. Every attempt has been taken to ensure the accuracy and completeness of the information given in this report. All teams have been given the opportunity to examine the summary data that is contained in this document.

Since the production of the 2010 report the ownership of the data relating to Mountain Rescue Incidents has been clarified. The MRCoFS Statistician receives the data from the Scottish teams, and produces the report on behalf of Association of Chief Police Officers Scotland (ACPOS). The incident reports and their contents are the property of the eight police forces in Scotland. It is intended that a fully electronic system run by the police, using a Scotland-wide database will be introduced in the next year. Once this is in place, the role of the MRCoFS statistician will change to that of interpreting the data generated and the production of future versions of this report. This will be a very welcome reduction in the workload of the statistician, who like his predecessors, and indeed every Scottish Mountain Rescue team member provides his time on a voluntary basis.

The information given in this report should be taken as a summary of the work of the Scottish Mountain Rescue Teams over 2011. No attempt has been made to analyse the information in detail. Factual data with no analysis other than the noting of historical trends is presented. The intention is to let the statistics themselves demonstrate the value and service that the voluntary teams have provided, in terms of assistance to the mountaineering community and the wider population, within their remit for land based search and rescue in Scotland.





Executive Summary

There were a total of 573 incidents in 2011 during which the combined resources of all MRTs the SCRO and the two SARDA teams expended around 24,000 team member hours. The number of incidents and time expended varies considerably between teams, Police authorities and areas within Scotland. Following a decrease in the number of incidents in 2010, 2011 shows an increase in the number of incidents to which teams were called out. This is the continuance of a general trend over the last 10 years.

A total of 693 people were assisted of which 270 were injured and 52 died. These, are all slightly increased from the 2010 figures.

The number of non-mountaineering incidents decreased to 158 compared to 194 in 2010. This is equivalent to 27% of all incidents as opposed to 36% recorded in 2010. Mountaineering incidents are those where the activity undertaken was hillwalking, rock scrambling or climbing in either summer or winter. Non-mountaineering incidents include Snow and Water sports, Mountain Biking, missing persons and walkers in lowland, rural and urban areas. The percentage of non-mountaineering call-outs for each team varies considerably, but broadly reflects trends in previous years.

45% of all non-mountaineering incidents were searches either for people reported missing including despondants (individuals who may self-harm).

Helicopters from the RAF, RN or the MCA assisted in 34% of all incidents. There was also a small but significant contribution from police helicopters assisting in searches, and Scottish Ambulance Service Aircraft evacuating casualties.

SARDA dog teams assisted in almost 26% of all incidents. This includes 20 occasions when SARDA was called out directly by the Police, where no other MRT was required. Of these 1.5% involved both SARDA Scotland and SARDA South Scotland.



Continuing the trends of previous years, summer hillwalking is the activity which results in by far the highest number of incidents. Mobile phones remain the most common method of asking the emergency services for assistance, though for approximately 10% of incidents the method of contacting was not recorded by the team.

The number of rock climbing incidents (13 for 2011) is a marked increase on 2010 when there were only six. However, it still remains a small proportion of the total number of incidents and a single year's high figure may not be a major change in the frequency of climbing accidents in the longer term.

The small number of incidents involving avalanches and cornice remains very low. There were no incidents involving cornices reported in 2011, in spite of the long winter.

19% of all incidents resulted from a slip or trip. People who were lost, overdue or reported missing were cited in 12-15% of reports.

Leg injuries were by far the most common in incidents. This follows the pattern observed over many years.

Finally it should be noted that in 2011 an additional team joined the MRCofS-Hebrides Search and Rescue (HEBSAR). Their incident reports have been included in this report.



Overall Statistics

The summary data for years 2000-2010 is shown in Table 1 below.

Table 1: Summary Data from 2011- 2011

Year	Mountaineering	Non-mountaineering	Total
2001	347	65	412
2002	258	81	339
2003	289	101	390
2004	308	90	398
2005	321	137	458
2006	315	119	434
2007	333	145	478
2008	387	188	575
2009	402	172	574
2010	340	194	534
2011	415	158	573

There has been a general increase in incidents over the last ten years. From year to year numbers vary up and down considerably, so it is the longer term trend that is more revealing.

Generally, teams are busier than they were in 2010.

Types of Incidents

Incidents have for a number of years been separated into two broad categories. Mountaineering incidents represent those which the teams were originally created to respond to. Mountaineering Incidents are defined as those involving Hillwalking in Summer or Winter, Scrambling, Rock Climbing and Snow/Ice Climbing. They still represent the majority of incidents that teams are called out to, however as a percentage of the total number of incidents they are decreasing over the longer term. The 2011 results show an increase in the percentage of mountaineering incidents; future years will show whether this is a one-off results or a reversal of the longer term pattern.

Table 2: Mountaineering and Non-Mountaineering figures for 2011
(Figures for 2010 shown in brackets)

Type of Incident	Incidents	Fatalities	Injured	People Assisted
Mountaineering	415 (340)	21 (16)	210 (198)	553 (488)
Non-Mountaineering	158 (194)	31 (29)	60 (57)	140 (171)
TOTAL	573 (534)	52 (45)	270 (255)	693 (659)

The proportion of non-mountaineering incidents has been steadily increasing over time as a proportion of the total number of incidents. In 2011 this trend has reversed with 27 % of the total number of incidents falling into the non-mountaineering category a fall from 2010's figure of 36%. There is a huge variation in the percentage of non-mountaineering incidents from team to team, varying from zero to 90%. This data is presented in Table 5. For 2011 Glencoe MRT did not provide data on mountaineering vs non mountaineering incidents, so all their call-outs have been placed in the mountaineering category.



Non-mountaineering incidents cover a wide range of scenarios. A non-mountaineering incident as one where the casualty or missing person is not involved in climbing, scrambling or hillwalking. It is important to understand that this category relates to the activity that the casualty or missing person was involved in when the incident occurred, not the type of terrain or height above sea level. Non-mountaineering incidents may still require the skills, resources and capability of a mountain rescue team to deal with them. They may take place in poor weather, on a mountainside, in a cave or in terrain only accessible using climbing techniques. Non-mountaineering incidents may be searches, rescues or both.

- The incidents defined as as non-mountaineering are those involving:-
- Water sports (kayaking, fishing and swimming).
- Fell running, triathlon,
- Mountain biking,
- Pony trekking
- Hangliding, parapenting and paragliding.
- Aircraft crashes.
- People reported missing from residential/nursing homes, hospitals, etc
- Work related incidents such as Forestry, gamekeeping etc
- Assistance given to individuals, local communities or emergency services during severe weather etc

Table 3: Number of Incidents in each Mountaineering Activity Category

Activity	Number of incidents
Hillwalking Summer	242
Hillwalking Winter	61
Rock Climbing	13
Snow/Ice Climbing	33
Scrambling	4
Mountain Rescue	2
Others	6
Total defined	361



The table above does not include 54 incidents, for which no details were provided, hence the total is 361 rather than 415.

Summer Hillwalking dominates the activities for which teams were called out. The small number of rock climbing incidents is also a continuing trend though the number of incidents has doubled in 2011 from the previous year. Two incidents involved injury to team members during training sessions. The “Others” category spans both mountain and non-mountaineering activities and includes false alarms, animal rescue (such as cragfast sheep), crime-related events or medical evacuations.

Table 4: Number of incidents in each non-mountaineering category

Activity	Incidents
Water Sport	10
Snow Sport	1
Air Sport	5
Aircraft Incident	2
Mountain Biking	12
Running	5
Work Based	9
Self-Harm (Suicides)	19
Missing	56
Vehicle related	5
Local walking	11
Equestrian	3
Body recovery	9
Civil Resilience	2
Others	9
Total	158

By far the greatest percentage of non-mountaineering incidents (36%) relates to missing persons, with suicides the next highest category. Mountain Biking, Watersport and Local Walking (i.e. Dog walking, footpaths local to home etc) are the next most common. The “Others” category spans both mountain and non-mountaineering activities as explained above. There were small number of incidents related to off-road vehicle accidents, air sport and equestrian activities.





Incidents by team

There were a total of 573 incidents (415 mountaineering and 158 non-mountaineering) in 2011. As on some occasions more than one team was called out to assist, the above figures relate to the total number of incidents rather than the total number of all times every team was called out. Table 5 documents the total number of times MRTs and other units were called to assist in these incidents, together with the total number of hours expended by each team on searches and rescues. This is a man-hours figure- e.g. a call out in which 12 people were deployed for 5 hours yields 60 person hours.

The figure excludes the time the teams spent training, maintaining equipment and vehicles and fund-raising etc. combined number of person hours. It also excludes the time the police, the MCA, the Scottish Ambulance Service, private individuals, other organisations and the military spent providing support and assistance to the Mountain Rescue Teams.



Table 5: Summary of Incidents by Team

Team	Number of Incidents	Hours deployed	% Helicopter supported
Aberdeen MRT	7	386	*
Arran MRT	11	448	55
Arrochar MRT	21	404	86
Assynt MRT	7	66	100
Borders SRU	18	1248	58
Braemar MRA	31	1005	71
Cairngorm MRT	28	1064	57
Dundonnell MRT	18	940	56
Galloway MRT	14	605	21
Glencoe MRT	54	1473	‡
Glenelg MRT	2	0	*
Glenmore Lodge MRT	17	249	29
HEBSAR	2	20	0
Killin MRT	22	708	45
Kintail MRT	19	409	26
Lochaber MRT	105	3771	60
Lomond MRT	30	822	30
Moffat MRT	13	342	38
Oban MRT	20	340	60
Ochils MRT	17	996	53
Skye MRT	33	1295	52
Tayside MRT	52	1481	84
Torridon MRT	9	237	56
Tweed Valley MRT	17	825	41
Grampol MRT	34	587	58
Taypol SARU	51	1249	70
Strathpol MRT	54	1004	52
Kinloss MRT	22	214	*
Leuchars MRT	7	114	*
SCRO	1	92	0
SARDA (Scotland)	88	1054	0
SARDA (S Scotland)	35	300	0
	Total Hours	23934	

*Aberdeen, Glenelg Kinloss and Leuchars MRTs were never the leading team (i.e. the team the police called initially) in any incident thus the statistic is not applicable to them.

‡ Information not provided by Glencoe MRT





Table 6: percentages of Non-mountaineering Incidents for each Team.

The data in Table 6 shows the spread of non-mountaineering incidents across the teams. This is similar to previous years. It shows in the broadest sense the pattern of activity in each teams area of responsibility. SARDA, the RAF teams and SCRO have not been included in the table as they have a Scotland wide remit.

Team	%	Team	%	Team	%
Aberdeen MRT	57	Glenmore Lodge MRT	12	Torridon MRT	0
Arran MRT	4	HEBSAR	100	Tweed Valley MRT	94
Arrochar MRT	37	Killin MRT	23	Grampol MRT	18
Assynt MRT	0	Kintail MRT	0	Taypol SARU	40
Borders SRU	94	Lochaber MRT	<1	Strathpol MRT	48
Braemar MRA	25	Lomond MRT	30	Kinloss MRT	N/A
Cairngorm MRT	18	Moffat MRT	85	Leuchars MRT	N/A
Dundonnell MRT	28	Oban MRT	40	SARDA (S)	N/A
Galloway MRT	50	Ochils MRT	53	SARDA (SS)	N/A
Glencoe MRT	*	Skye MRT	9	SCRO	N/A
Glenelg MRT	*	Tayside MRT	36		

*Data not recorded by team

Incidents by SMC Region

Traditionally, MRCofS Incident reports are published annually in the Journal of the Scottish Mountaineering Club (SMC). In this, incidents are divided into the regions as defined by the SMC District Guides. Table 7 provides details of the incidents by SMC area and the type of incident that occurred. The incidents for Glencoe MRT have all been assigned to the area of that name.

Table 7: Incident information for each SMC region

	Mountaineering	Non- Mountaineering
Northern Highlands	22	6
Western Highlands	31	0
Ben Nevis	94	1
Glencoe	59	1
Other Central Highlands	10	9
Cairngorms	71	21
Southern Highlands	71	50
Skye	15	1
Islands other than Skye	20	12
Southern Uplands	22	56
Total	415	158



Incidents by Police Authority

2012 will be the last year that incidents are collated by police authority. In March 2013 the eight Police authorities will be combined into a single force- the Police Service of Scotland. The number of teams in each of the areas varies from Northern Constabulary with ten to Fife with none. Table 8 shows the distribution of incidents across the whole of the country by force.

The pattern is broadly similar to past years with by far the most incidents being recorded in Northern Constabulary's area of operation- just under half of the total number of incidents were in this one force's area. The incidents in Fife, were all call-outs involving SARDA Scotland or SARDA South Scotland.

Table 8: Distribution of Incidents by Police Authority

Police Authority	Number of Incidents (2010 in brackets)
Northern Constabulary	279 (251)
Grampian Police	39 (33)
Tayside Police	44 (31)
Fife Constabulary	9 (10)
Central Scotland Police	62 (72)
Strathclyde Police	81 (70)
Lothian & Borders Police	35 (43)
Dumfries & Galloway Constabulary	24 (24)
	573 (534)



Method by which Alarm was raised

The overwhelming majority of incidents (63%) were initiated by calls from mobile phones. This is similar to previous years. Landlines were the next most common method of the alarm being raised. One interesting new statistic is the use of personal locator beacons which were legalised for use in Scotland in 2011, where four incidents were initiated from these devices. It should be noted that these report initially to a facility in Denver, USA, who then inform the Aeronautical Rescue Coordination Centre (ARCC) at RAF Kinloss, Moray. ARCC then inform the Police or the MCA dependant upon whether the location is over sea or land..

In the context of the table below "Not recorded" simply means that the mountain rescue team was not aware of the means by which the alarm was raised to the Police initially. "Other" includes word of mouth, witnessed by a team member or while the team were out training.

Regrettably in 2011, this category includes two incidents that occurred where team members were injured during training exercises as recorded in Table 3.

Table 9: Method by which Alarm was raised

Method	Number
Mobile Phone	366
Landline	90
Personal Beacon*	4
Email	0
Not Recorded	66
Other	47



Reasons for Mountain Rescue Call Outs

It is often difficult to assign a simple cause or causes to an incident. A slip where a walker injures their leg and needs to be carried off is has an obvious cause. Their location means an MRT is needed to bring them down to the nearest road where they can be handed on to the Scottish Ambulance Service. In other cases, the answer is not straightforward. If a walker's body is located after they have fallen a considerable distance, the direct cause of the fall may not be obvious, and may involve a number of factors, weather, skill level, equipment failure, none of which may be obvious to the mountain rescue team when they arrive at the scene. It is thus quite difficult to define exactly what caused the incident, and issues such as the ability of the casualty are very subjective.

The individual incident forms provided by the teams do allow the identification of a few factors relevant to the cause of the incident. Where these are not judgmental, i.e. do not include subjective issues such as ability and experience, or adequacy of footwear, clothing or equipment carried, it is possible to provide some objective data. These are shown in table 10 below.

Where multiple causes were provided these are included, hence the total numbers below add up to more than the total number of incidents, even though for some incidents no cause was recorded. Percentages have also been calculated.

The figures show that following the trend of previous year, accidents are dominated by simple slips and trips. There are similar percentages for those reported lost, overdue and reported missing.

One in twelve causes involved a person in whom illness was a factor in the teams being called out. Small number of incidents involved people becoming cragfast (stuck and unable to move up or down) on steep ground and where poor weather was a factor.



Very small numbers of incidents (all less than 1%) listed rockfalls, avalanches or cornice-related incidents, and failures of belays.

~1% of reports listed a work related accident, i.e. shepherding, stalking, forestry accidents where the teams were called out to assist.

Table 10: Main Causes associated with Incidents

Cause	No	%	Cause	No	%
Slip	116	19	Belay Failure	4	<1
Fell	77	12	River or Water based	19	3
Lost/Navigation error	86	14	Reported Missing	97	15
Overdue	75	12	Weather	21	3
Benighted	19	3	Avalanche Natural	4	<1
Illness	49	8	Avalanche Triggered	4	<1
Cragfast	27	4	Fell through cornice	1	<1
Rockfall	5	<1	Cornice collapse	0	0
Work Accident	9	1			



Injuries or Illnesses of Casualties

Table 11 shows the injury profile for those injured in mountaineering incidents in 2011. This details the main injury to a casualty. As in previous years, injuries to the leg and foot dominate the figures, with 39% of all injuries. Multiple injuries were recorded where the casualty had, for example, head and leg injuries, both of which were serious. Cuts and bruises were the next highest.

For people who became ill and were rescued by the teams, the main problem reported was hypothermia, with exhaustion reported as the next most common cause. Additionally five individuals suffered heart failure of whom three unfortunately died. Asphyxia includes some suicides.

Table 11: Types of Injury or Illness

Injury or Illness	Number
Arm/Hand	10
Leg/Ankle/Foot	105
Chest/Shoulder	4
Pelvis	3
Cuts and bruising	19
Lacerations	1
Hypothermia	26
Hyperthermia	0
Back/Spine	16
Head Face	12
Multiple injuries	22
Heart Failure	5
Asphyxia	6
Other Illnesses	26
Exhaustion	15
Total	270



Method of Casualty Evacuation

Lost, stuck or injured people may be evacuated or helped to safety in a number of ways once they have been located and made safe or their condition stabilized. The table below shows the evacuation method for each of the 564 incidents that occurred in 2011. Helicopter evacuation proved the most common, proving the value of this service to the teams and to the casualties.

Walking off (assisted by the team) was the next most numerous. These do not include “talk-downs” which form part of the total under “Found own way back”. A talk-down is where the team is able to speak to the lost person by mobile phone, establish their location and provide directions for a safe route off the hill.

The traditional stretcher evacuation was the next most frequently required. Smaller numbers were picked up in rescue vehicles (this includes boats), and a few were located by the police, i.e. were not on the hills. In 4% of incidents the individuals were able to “Self-rescue” i.e. make their own way off, after the team had been informed of their situation.

Table 12: Method of Evacuation

Method	Number
Not Evacuated/Evacuation not needed	146
Helicopter	157
Stretcher	65
Walked off by team(s)	71
Vehicle	32
Combination of methods	1
Found own way back	25
Located by police	9
Other	5
Not recorded	62



Usage of Helicopters

With the current contract for the Future UK Search and Rescue Helicopters at the bidding stage, the usage of the existing RAF/RN/MCA capacity in Scotland may be of interest. The number of times each asset assisted with an incident involving Scottish Mountain Rescue teams is given below. Assistance from Police and Scottish Ambulance is also recorded.

Table 13: Usage of helicopters

Aircraft	Call Sign	Times assisted
RN Gannet	Rescue 177/8	60
RAF Lossiemouth	Rescue 137/8	90
RAF Boulmer (Northumberland)	Rescue131/2	7
MCA Stornoway	Rescue 100/1	40
MCA Shetland	Rescue 102/3	0
Police	Various	19
Scottish Ambulance Service	Heli-med	9
Private Aircraft		0





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