**Commissioned by the Deer Commission for Scotland**

**Output:** **A review of systems used to monitor competence in other countries**

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## 1 Background:

In 2005 the DCS asked whether deer hunters should 'demonstrate a degree of competency'. The response to this question in the Close Seasons consultation was general 'agreement that competence should be demonstrated' in order to enable the public to have confidence in hunters' handling of issues of public safety, deer welfare and food safety. However there was divergence on what competence meant and how it should be assessed.

In this report competence means that an individual has "sufficient skills and knowledge to carry out their job to an acceptable standard"[1]. The DCS's draft definition of competence[1] proposes that there are three aspects or components of competence:

1. Ensuring public safety (operator and others)
2. Safeguarding deer welfare (shot and dependent)
3. Ensuring food safety (minimising contamination and clear traceability)

Monitoring of a hunter's knowledge of deer biology, behaviour and habitat was also considered by the DCS and is widely included in hunter training programmes in other countries.

At present the existing systems that assess competence in Scotland, through the Fit and Competent Register and the Deer Stalking Certificates, have gaps in who is assessed and what skills are assessed[2].

The objective of this report is to report on existing and new ideas from other countries that could be used in Scotland to monitor deer hunters' competence.

Deer populations are often monitored for management purposes and data from hunters may be used. Population management systems were therefore also reviewed to determine whether they could have a wider application for the monitoring of hunters' competence.

## 2 Method:

Representatives of authorities responsible for hunting from seventeen countries[3] were surveyed by phone and written questionnaire between October and December 2007. Less data was obtained on monitoring than assessment as systems are probably less conspicuous, and less monitoring of competence is carried out, as a greater emphasis is placed on assessment.

They were asked to provide information relating to the monitoring of deer populations, deer welfare, public safety, food safety and biology and habitat in relation to the questions outlined below. The eleven European countries selected were mainly northern and central

[1] Findlay, J. A draft definition of competence including the scope, standard and measures required. Undated. Reference: Competence C2.1.1

[2] Daniels, M and Findlay, J. A report on the limitations and costs of current systems and identity needs in terms of testing competence for welfare and safety. Undated. Reference: Competence C1.1.1

[3] The term 'country' is used to include countries, American states and Canadian provinces.

European and so had some similarities with Scotland in terms of hunting history, culture or ethics. The four American states and two Canadian provinces were selected as they all had relatively high numbers of deer hunters. The survey questions are presented below.

| **Questions asked on how competence is monitored:** | |
|---|---|
| Is the ability of hunters monitored in your country? | Is the data on monitoring used or reported? If so how? |
| Who monitors the ability of hunters? | What are the strengths of your national monitoring system? |
| How do they monitor the ability of hunters? | What are the weaknesses of your national monitoring system? |
| When do they monitor the ability of hunters? | Are there any new ideas or proposals for monitoring hunters' ability in your country? |
| How often do they monitor the ability of hunters? | How much does the monitoring system cost? |
| Where do they monitor the ability of hunters? | What happens if a hunter does not meet requirements? |
| What proportion of hunters are monitored each year? | Is the data on monitoring used or reported? If so how? |
| What happens if a hunter does not meet requirements? | |

| **Countries surveyed** | | | |
|---|---|---|---|
| **Europe** | | **America** | **Canada** |
| Czech Republic | Liechtenstein | Michigan | Ontario |
| Denmark | Belgium | Texas | Manitoba |
| Netherlands | Germany | New York | |
| Hungary | Norway | Pennsylvania | |
| France | Sweden | | |
| Holland | | | |

The research team's general perception was that the systems used to monitor competence are less well developed and comprehensive than the systems used to assess or test hunters' competence. There was little evidence that data from the monitoring systems was used to improve assessment systems and vice versa.

### Ensuring public safety (operator and others)

All of the countries include safety within the tests or assessments hunters must take before they can legally hunt[4]. Indeed, many of the hunter/sportsman education programmes in America were originally introduced with the primary objective of improving the sector's safety record. There is little evidence that there is a public safety issue in Scotland.

Trend analysis of the number of reported firearms incidents is commonly used to monitor the sector's safety record but this type of analysis is not currently done in Scotland. The representatives from Michigan, New York, Manitoba and Ontario all cited that a decline in the incident rate was a clear demonstration of the success of the assessment programmes which have been introduced.

In most of the countries, monitoring of safety during hunts is based on spot checks and investigations in response to complaints. In many cases this is the responsibility of law enforcement officials. France, Hungary, Norway, Michigan and New York have dedicated officers for nature and hunting matters. In France, Office National de la Chasse et de la Faune Sauvage (ONCFS) is responsible for surveillance of hunting to ensure that all rules are being observed. It employs over 1,600 staff and has local agents who liaise with hunters before, during and after shoots to ensure compliance with rules and with required standards. It produces data on the number of hunters, results from the hunters' test, firearms incidents and non-compliance with the required standards.

In Scotland it would require changes to the way in which the police and / or health service record firearms incidents to allow hunting related incidents to be separated from others.

[4] Beedell, J and Teanby, A. A review of different options, based on new and existing ideas, used in different countries and for different species that are used to assess competence. 2007. Next Steps report 5. Smiths Gore, for the DCS.

**Safeguarding deer welfare (shot and dependent)**
Two of the main issues associated with deer welfare are wounding and the safety of venison entering the food chain. There is no firm or scientific evidence of wounding being an issue in Scotland; the following types of system were introduced in countries where wounding was known or perceived as a concern.

Monitoring wounding in Denmark
Denmark generally monitors its hunters and wildlife on a project by project basis in response to issues which are identified. Research is conducted to provide accurate data. If a situation requires intervention an action plan will be developed and monitored by a research project[5].

An example of one such project relates to wounding by hunters. Research published in 1996 by the National Environmental Research Institute (NERI) identified that 25% of first-year and 36% of older pink-footed geese carried embedded shot[5]. Population modelling showed that pellets were inflicted on 7% of the adult population each year, and that for every ten geese bagged a further seven are left with embedded shot. The Danish Game Act states explicitly that management for hunting should be based on a "wise use" concept, including ethical as well as ecological principles, and that hunters must not inflict unnecessary suffering upon game. The observed wounding rates were judged not to be in compliance with the Act. Consequently the Danish Council for Wildlife Management developed an action plan to reduce the degree of wounding of geese by shotgun hunting which was subsequently endorsed by the Ministry of the Environment in preparation for the 1997/1998 season. The plan was to encourage compliance with the recommended maximum range of 25m for goose shooting and no more than three shots expended per bagged goose (criteria and range estimates are included in the Danish hunting examination). Previous studies had shown that on average eight shots are used and that ranges of 40-50m are regularly observed[6]. For the first time, a "carrot-and-stick" approach was adopted as the plan stated that if major reductions were not achieved on a voluntary basis, further limiting of hunting opportunities or, as a final resort, protection may become necessary to achieve improvement. A real strength of the action plan was engaging hunters through information campaigns from both the government (Forest and Nature Agency) and the Hunting Association. Dr Noer from NERI sees this as a factor critical to success.

Alongside the initiative NERI were commissioned to monitor the proportion of the population carrying embedded shot. This was achieved through X-raying live captured samples of the population over a seven year period[7]. The research found that the proportion of wounded geese had declined and population modelling showed that this could not be attributed to population growth or a reduction in the harvest size. It was therefore concluded that the campaign to observe the maximum 25m range was the most probable cause. So the initiative was considered as successful. The monitoring programme indicated a 50% reduction in numbers wounded; the true achievement may in fact be greater as the species is also hunted in Norway, where no such initiative was under way.

[5] Personal Communication, Sandor Markus, Forest and Nature Agency, 9 January 2008
[6] Noer, H. & Madsen, J. (1996) Shotgun pellet loads and infliction rates in pink-footed goose *Anser brachyrhynchus. Wildlife Biology*, **2**, 65-73.
[7] Noer, H. (2007) Reducing wounding of game by shotgun hunting: effects of a Danish action plan on pink-footed geese. *Journal of Applied Ecology,* **44**, 653-662

**Figure 1 Material used in the Danish information campaign to reduce wounding**


Studies of wounding in eider and mallards have shown that hunter's skill also affects the likelihood of wounding. Consequently a compulsory shotgun firing assessment is due to be introduced.

Whilst not undermining the results of the study, some limitations should be should be borne in mind. The research did not account for seriously wounded animals which do not survive until they could be caught; however the number of these should decline inline with less seriously wounded geese. Also animals can be wounded without shot remaining in their body (a study of shotgun harvested mallards and black duck found 6% did not contain any shot[8].)

Shotguns are used to hunt around half of the roe deer bag in Denmark, generally calves are hunted by shotgun in woodland. Therefore in 1997 preliminary research was conducted by NERI into wounding of roe deer by shotgun hunters[9]. Within a sample of 106 bucks harvested by rifle, six carried embedded shotgun pellets, this indicated a lower than anticipated degree of wounding. However the research team are not confident about the sample as deer were voluntary contributed by hunters, thus hunters may have only submitted carcases from areas where they judged them unlikely to contain shotgun pellets.

During 2007 the Danes collected roe deer wounding data by monitoring hunts in state forests. Hunting parties in the state forests are accompanied by Game Wardens and hunters are asked how many shots they made and also how many animals were bagged. Wardens can also record the number of shots heard. The data indicates that one deer is wounded for every four bagged. When hunting in the state forest, hunters use US shotgun pellets of a diameter which is not permitted in Denmark, therefore any smaller diameter pellets in the carcass from wounding can be identified by X-ray.

Whilst the research is at an early stage, wounding in deer does not appear to be attributable to range and generally hunters adhere to the recommended 20m maximum range[8]. Roe deer tend to either creep through woodland or sprint; Dr Noer believes shooting deer at full speed is the greatest cause of wounding. Wounding is therefore caused by a combination of the way the animal behaves and the environment they are

[8] Bellrose, F.C. (1953) A preliminary evaluation of cripple loss in waterfowl. *Transactions of the 18th North American Wildlife Conference, March 1953, Washington D.C., 337-360*
[9] Personal Communication, Dr Henning Noer, Norwegian Institute of Nature Research, 14 January 2008

hunted in. If the situation is found to require action an information campaign is likely to be used to reduce wounding rates.

Sampling deer is costly as four X-rays are needed per carcass costing around £60 each. This has to be done locally as hunters wish to eat the deer meat. A significant amount of time is required to build up a large sample of carcases as a day's hunting will typically yield 5-6 carcases. It is recognised that this type of sampling is less useful where rifles are used for hunting.

The geese wounding project demonstrated that the sector can be engaged if credible research shows that there is an issue. Some hunters were shocked by the findings and happy to take action. The roe deer project has not yet reached this stage.

It is clear that project based initiatives can deliver the required changes in hunting behaviour once support from hunters is obtained and hunters are educated about the required changes, though the training they receive and assessments of competence. The independence of the research appears to be important, as hunters are more likely to assign credibility to research carried out by independent specialists or where data is provided by hunters (such as in Denmark and Norway; see following section on Deer biology, behaviour and habitat). This is important as hunters must trust and accept results in the event that it is necessary to resort to legislation.

Projects are generally monitored over a number of years (typically 5-8) to permit the identification of a trend. In order to conclude whether initiatives are having an effect in just a few years would require much larger sample sizes and greater resource use. Following on from the projects, it is likely that the issues will be monitored periodically.

Shooting proficiency tests in Norway

Norway minimises wounding through regular shooting proficiency tests. Each year hunters are required to demonstrate a required degree of competence before they can hunt large game. This is then annually monitored through anonymous questionnaires sent to a sample composed of 7,500 moose hunters, 3,000 red deer hunters and 600 wild reindeer hunters, (see Annex 1 for an example of the questionnaire.)

Respondents are asked to provide information such as: age, number of shots fired before the hunting season started (as a measure of the practice / training they did), calibre, experience, range, where they aimed and hit, how far the animals went before they died, if they needed more than one shot and if they found the game. The results of the study are communicated to all active hunters each year through an information brochure. Through this the Directorate of Nature Management aims to provide high quality information and practical tips to hunters to help them minimise wounding of big game. The anonymity given to respondents promotes honesty so results are likely to be a good indicator; nevertheless the methodology does not permit any form of validation or cross checking to ensure this is the case. Over the long term this methodology is likely to produce a suitable indicator as sample sizes are robust and mis-reporting is likely to have a relatively consistent effect.

The Canadian provinces of Ontario and Manitoba survey a sample of hunters each year to collect information for use as variables in their deer population models. Hunters are asked how many deer they wounded during the season so that the resultant die off can be factored in. The information is provided for research purposes and would not be as forthcoming if there were personal ramifications.

In Liechtenstein, all game carcases have to be presented to a vet employed by the Home Office for the Forest, Nature and Landscape (AWNL) for assessment of shot placement. If the vet judges that the deer has been shot in the incorrect place, the hunter will be questioned and can be fined or have their hunting certificate revoked temporarily or permanently. This system is very personal as the hunting community is small and all

hunters are known by the local representative. Tight community and social control enforces high standards as no one wants to be known to have done anything wrong[10].

Dutch game dealers, often in conjunction with vets, assess the condition of carcases and if shots are well placed. If they judge a carcass to be damaged, they will not accept it for human consumption. Hunters that regularly fail to produce a "good shot" or prepare a carcass in accordance with hygiene regulations will therefore find their carcases unmarketable. This system is principally a food safety measure and is not designed to enforce welfare standards with regards to shot placement however hunters are encouraged to demonstrate competence as a consequence. Carcases for private consumption are not inspected.

**Ensuring food safety (minimising contamination and clear traceability)**
In the EU, game meat must be treated in accordance with EU Food Hygiene Regulations EU 853/2004 and EU 854/2004 which outline how game should be examined in the field and the subsequent post-mortem examination by the competent authority[11]. In the UK, a trained person inspects the viscera of a shot deer to determine whether it contains any abnormal characteristics that would indicate that the animal may present a risk to human health. The trained person then completes and attaches an individually numbered declaration to the carcase reporting his / her findings. If the carcase is then supplied to an approved game handling establishment (AGHE), it is then inspected by an official veterinarian from the Meat Hygiene Service.

It should be noted that how this legislation is applied in the UK may be changed as the Food Standards Agency perceives no obvious advantage in having a post-mortem inspection carried out by an official veterinarian (over and above the AGHE's HACCP-based inspection of carcases.) It has proposed a two–year pilot study to investigate this from late 2008 onwards.

From December 2005 the requirements of Regulation 853/2004 became an integral part of the Deer Stalking Certificate Level 1, so undertaking DSC Level 1 training and achieving the DSC Level 1 certificate from that date provides proof that a hunter has the knowledge required by the legislation for large wild game. This system appears to work well and has now been largely accepted by the hunting community. Its weakness is that not all hunters have taken the DSC and so some may not be aware of the legislation for large game; however, there is little evidence of food safety failures[12].

None of the countries surveyed monitor carcass quality by use of indicators relating to how hygienically the animal was gralloched.

In North America, game meat cannot be sold and so food safety is not monitored. Game meat is for personal consumption only so the onus is on the hunter.

[10] For further development of this point see the section on safeguarding deer welfare in Beedell, J and Teanby, A. A review of different options, based on new and existing ideas, that could be used in Scotland for monitoring competence. 2007. Next Steps report 8. Smiths Gore, for the DCS.
[11] EU Regulation 853/2004 Annex III, Section IV (Wild Game Meat), Chapters I, II & III and EU Regulation 854/2004 Annex I, Section IV (Wild Game Post Mortem Inspection), Chapter VIII
[12] Personal communication, Vanessa Charles, Food Standards Agency, 5 February 2008

**Deer biology, behaviour & habitat, impact on forestry and farming**
The main indicator that is used is estimates of the deer population, often broken down by age and sex. Many countries rely on hunters to supply hunting returns to be able to make population estimates and allocate permits for the next hunting season. There is often an element of compulsion on hunters and hunting ground owners to provide the information.

In Denmark, populations are managed by varying the length of the open season, based upon information received from hunters who voluntarily submit annual shooting reports. About 60% of hunters provide the reports as most hunters keep a personal hunting journal and they recognise that if they do not provide sufficient information there may not be an open season for that species next year.

Detailed cull statistics are produced and published for all Norwegian big game species, segregated by age, sex and hunting area. They are collated from annual hunting reports which hunters are obliged to submit (90-94% comply). Hunters trust the statistics as they are involved in data collection, however this does increase the margin of error. It is also acknowledged that hunters could provide biased information in response to unpopular hunting restrictions.

Deer populations are monitored by a tagging system in Holland. The Fauna Management Board biologists determine the carrying capacity of an area and how many deer can be culled based on population counts supplied by hunting ground owners, which are not independently verified. If hunting ground owners do not supply the required population monitoring information, they are not allocated any tags.

## 3 Implications and options:

If a system for monitoring competence is introduced, it must be simple to understand and administer. The purpose of the system must be clear, i.e., to monitor a number of components of deer hunters' competence. In terms of the three components that the DCS has identified, there are a number of options:

### Ensuring public safety

Ensuring public safety of the operator and others is widely done based on data compiled by law enforcement authorities, when they are notified of incidents which are attributed to hunting. This appears to be a successful approach providing that the data can be segregated from other firearms offences and incidents. In some countries dedicated officers are responsible for enforcing hunting regulations and ensuring hunters have all the necessary permissions.

### Safeguarding deer welfare

Safeguarding deer welfare by ensuring correct shot placement and reducing wounding is monitored though research programmes, information from hunters and also from vets and game dealers as the venison enters the food chain. Retrospective monitoring of competence is generally done at sector level, for example anonymous wounding surveys in Norway. The Danish wounding projects were conducted at sector level and the primary methodology did not involve hunters in data collection, as indicators were used to assess the effect of hunting upon the wildlife. As a result hunters are not burdened with data recording and the data cannot be distorted by hunters self-reporting. Monitoring of the issue was conducted on a project basis rather than a permanent monitoring programme. Consequently the agenda is kept fresh, with only current issues monitored. This helps engender support from the sector and increases the acceptability of monitoring as progress is being observed, rather than their performance being under permanent scrutiny. Measures to prevent wounding, such as annual shooting tests, are generally monitored at the individual level, aiming to enforce high standards in the hunting population.

Any monitoring system must ensure that it is based on reliable data. The main issue here is whether and how hunters are censured if they report deer they incorrectly shot or it is evident in the resultant carcasses. Any approach should start with training of hunters on distance estimation, shoot and no shoot scenarios and shooting accuracy.

**Ensuring food safety**

Examination of shot positions on carcases is carried out to a limited extent in the countries surveyed and primarily for food safety reasons. Given that carcases destined for personal consumption are generally not inspected, hunters could be selective regarding which carcases they supply to the food chain if shot placement is considered in relation to individual competence. Information could be requested from game dealers and vets on the number of deer correctly and incorrectly shot and handled.

**Deer populations**

Deer population modelling will, like deer welfare, only be successful if based on reliable data. In the surveyed countries this is mainly supplied by hunters and hunting ground owners. Another important consideration is that hunting selectivity (i.e., ratio of male and female deer shot) must be considered when cull data is being used to model populations.

## Annex 1 Norwegian wounding survey anonymous questionnaire and English translation

FYLKESMANNEN
I MØRE OG ROMSDAL

NORGES JEGER- OG FISKERFORBUND

# Bedre Hjortejakt
## 2003

Bomskudd og skadeskudd gjør jegeren usikker, tar tid for jaktlaget og kan påføre hjorten store lidelser. Dødelige førsteskudd gir en sikrere, mer human og effektiv jakt. Ved å fylle ut skjemaet kan du bidra til at jegerne i fylket får mer kunnskap om hva som er sikre og hva som er tvilsomme skudd. Fyll ut et skjema for **det første skuddet** som løses mot hver **hjort**, uansett utfall av skuddet. Fyll det ut på eller ved skuddstedet, og gi skjema til jaktleder. Alle skjema blir behandlet anonymt, og jegerne får resultatene i god tid før neste jaktsesong. Spørsmål rettes til NJFF Møre og Romsdal, tlf: 71 21 04 90

Skitt Jakt!


Ulf Lucasen
Viltforvalter
Fylkesmannens miljøvernavdeling

Rolf E. Sch. Kollstrøm
Fylkesekretær
NJFF Møre og Romsdal


### LITT OM SKYTTER

1. Din alder ____ år

2. Kjønn: ☐ Mann ☐ Kvinne

3. Hvor mange år har du jaktet? ____ år

4. Hvor mange øvelseskudd skyter du hvert år? ____

5. Hvor mange hjorter har du skutt de siste 5 årene?

Ca ____

6. Jaktet du alene ☐ da du skjøt, eller sammen med andre ☐ ?

### BAKGRUNNSDATA

7. I hvilke kommune ble hjorten påskutt? ____

8. Hvor mange hjorter er valdet tildelt i år? ____

9. Dato og tid for skuddet. Dato ____ Klokka ____

10. Skjøt du: Med anlegg ☐ Uten anlegg ☐

| | Med anlegg | Uten anlegg |
|---|---|---|
| Stående | ☐ | ☐ |
| Sittende | ☐ | ☐ |
| Liggende | ☐ | ☐ |

11. Var det:

| Vær: | Lys: | Føre: |
|---|---|---|
| ☐ Sol | ☐ Skumring | ☐ Barmark |
| ☐ Opphold | ☐ Dagslys | ☐ Rimfrost |
| ☐ Regn/Snø | ☐ Grålysning | ☐ Spørsnø |
| ☐ Sterk vind | ☐ Natt | |

### LITT OM SKUDDSTEDET

12. Jaktet du på ☐ Innmark ☐ Utmark

☐ Jeg satt på post

☐ Jeg var driver

☐ Jeg var smygjeger

13. Var posten:

☐ Fast ryddet ☐ Tårn/Hytte

☐ Ikke ryddet eller tilrettelagt

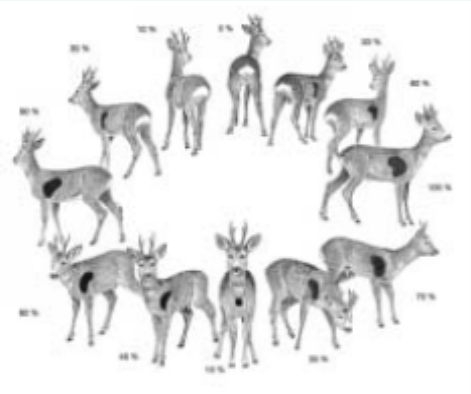
14. Gikk du med hund? ☐ Ja ☐ Nei

15. Skuddavstand fram til hjorten (ca) _____ meter

## HJORTEN I SKUDDET

16. Hjortens fart:
- ☐ Sto stille
- ☐ I skritt
- ☐ Løp

17. Kryss av for hjortens stilling i skuddøyeblikket.



## LITT OM SKUDDET

18. Var førsteskuddet:
- ☐ Dødelig (hjorten gikk mindre enn 300m)
- ☐ Skadeskudd (over 300m/fant hår, blod el.l.)
- ☐ Bomskudd (konstatert.)
- ☐ Dyret ble felt ved oppfølgingsskudd

19. Ved treff:

Hvor tror du første skuddet traff?
- ☐ Hjerte/lungeområdet
- ☐ Vom/bakpart
- ☐ Rygg
- ☐ Nakke
- ☐ Føtter
- ☐ Bog
- ☐ Hode/hals

20. Ved skadeskudd:
- ☐ Brukt ettersøkshund som var med på jakta.
- ☐ Tilkalt annen godkjent ettersøkshund.
- ☐ Brukt ikke godkjent hund.
- ☐ Ikke brukt hund.

21. Hvor langt var ettersøket?
- ☐ Mindre enn 300meter
- ☐ 300 – 600 meter
- ☐ Lengre enn 600meter

22. Resultat av ettersøk?
- ☐ Hjorten ikke funnet
- ☐ Hjorten funnet død
- ☐ Hjorten funnet levende

23. Hvor lang tid gikk før ettersøket startet? _____ t

24. Hvor lenge gikk det fra skuddet til ettersøket var over? _____ t

25. Ble hjorten i tilfelle avlivet av:

☐ Postmannskap ☐ Ettersøksmannskap

Ved bomskudd

26. Hvor tror du skuddet gikk?

☐ Over ☐ Under ☐ Bak

☐ Foran ☐ Vet ikke

27. Hva tror du kan være årsakene til bom- eller skade-skuddet?

Sett 1 på den viktigste årsaken, 2 på den nest viktigste osv.

☐ Hjorten dukket opp for brått

☐ Hjorten hadde for stor fart

☐ Kula traff kvist eller lignende

☐ For langt hold for meg

☐ Hjorten kastet på seg i skuddøyeblikk

☐ Vanskelig skytestilling

☐ Svakt lys

☐ Sterkt motlys

☐ Vanskelig vær

☐ Jeg var andpusten/skjelven/hjertebank

☐ Følte press fra laget om å skyte

☐ Feil ved våpen eller sikte

☐ Annet, forklar kort: .....

.....

.....

.....

.....

## LITT OM JAKTLAGET

28. Jeg er: ☐ Fast medlem i jaktlaget

☐ Gjestejeger ☐ Jakter bare alene

29. Hvor mange år har du jaktet med laget? ☐

30. Hvor mange er det med på jaktlaget? ☐

31. Hvor ofte (ca) jakter laget sammen hver høst?

☐ Hver helg ☐ Hver annen helg

☐ Sjeldnere ☐ dager sammenhengende

32. Møtes jaktlaget til:

☐ Dugnader i terrenget? ☐ Selskap?

☐ Avtalt skytetrening? ☐ Planlegging av jakta?

☐ Kurskvelder eller lignende om jakt?

33. Hvor ofte har jaktlaget møttes utenom til jakt det siste året? ☐ ganger

34. Har jaktlaget samlet diskutert problemet med bom og skadeskyting det siste året? ☐ Ja ☐ Nei

35. Blir årsaken til bom og skadeskyting noen ganger diskutert i pauser under jakta? ☐ Ja ☐ Nei

36. Føler du noen gang et press fra jaktlaget om å skyte på sjanser der du er usikker? ☐ Ja ☐ Nei

37. Har du andre opplysninger av interesse?

.....

.....

.....

**REGIONAL COMMISSIONER MØRE AND ROMSDAL**

**THE NORWEGIAN ASSOCIATION OF HUNTERS AND ANGLERS**

**Better Deer Hunting 2003**

Misses and wounding make the hunter uncertain, takes up valuable time for the hunting party and can cause the deer considerable suffering. Fatal first shots make for a safer, more humane and effective hunt. By completing the questionnaire you can help ensure that the hunters in the region gain a better understanding of what are accurate and what are doubtful shots. Complete one questionnaire for **the first shot** fired on each **deer,** regardless of the result of the shot. Complete it on or near the place where the shot was fired, and hand the questionnaire to the hunt leader. All questionnaires are processed anonymously and the hunters receive the results well in time before the next hunting season. All questions should be addressed to the NJFF (Norwegian Association of Hunters and Anglers) for Møre and Romsdal, tel.: 71 21 04 90.

Good Hunting!

Ulf Lucasen
Game Administrator
Environmental Department of the Regional Commissioner

Rolf E. Sch. Kollstrøm
Regional Secretary
NJFF Møre and Romsdal

**A LITTLE ABOUT THE HUNTER**

**1.** Your age years

**2.** Gender: Male Female

**3.** How many years have you been hunting? Years

**4.** How many practice shots do you fire each year?

**5.** How many deer have you shot in the last 5 years?

Approximately

**6.** Were you hunting alone when you shot the deer or were you with others ?

**BACKGROUND DATA**

**7.** In what municipality was the deer shot?

**8.** How many deer are allocated for hunting this year?

**9.** Date and time of the shot. Date Time

**10.** Did you shoot: With a rest Without a rest

Standing
Sitting
Lying

**11.** Was it:

| **Weather:** | **Light:** | **Conditions:** |
|---|---|---|
| Sunny | Dusk | Open ground |
| Dry | Daylight | Hoar frost |
| Rain/Snow | Dawn | Tracking snow |
| Strong wind | Night | |

**A LITTLE ABOUT THE LOCATION OF THE SHOT**

**12.** Were you hunting on home fields outlying fields

I sat at the station
I was the driver
I was a following hunter

**13.** Was the shooting station:

Permanently cleared Tower/Hut Not cleared or organised/prepared

**14.** Did you hunt with dogs? Yes No

**15.** Shooting distance from the deer (approx.) metres

**THE DEER THAT WAS SHOT**

**16.** Speed of the deer: Stood still

Walking

Running

**17.** Place cross against the position of the deer at the time of shooting.

**A LITTLE ABOUT THE SHOT**

**18.** Was the first shot:

Fatal (the deer continued walking less than 300 m)

Wound (over 300 m/hair, blood found etc.)

Miss (verified)

The animal was felled with a follow-up shot

**19. If the deer was hit:**
Where do you believe the first shot hit?
Heart/lung region
Paunch/rear quarters
Back
Back of head
Feet
Shoulder
Head/neck

**20. If wounded:**
Used hunting dog to search for animal
Called other approved hunting dog
Used a dog not approved
Did not use a dog

**21.** How far did the search cover?

Less than 300 metres

300 – 600 metres

Further than 600 metres

**22.** Result of the search?

The deer was not found

The deer was found dead

The deer was found alive

**23.** How long was it before the search began? hours

**24.** How long was it from when the shot was fired until

the search was over? Hours

**25.** In the case in question was the deer killed by:

The hunting party The search party

**In the case of a miss**

**26.** Where do you think the shot went?

Over Under Behind

In front Don't know

**27.** What do you think may have been the reasons for the miss or wound?
Enter 1 for the most important reason, 2 for the second most important, and so on.

The deer appeared too suddenly
The deer was running too fast
The bullet hit a branch or the like
Too long a range for me
The deer fled the moment I fired
Difficult firing position
Dim light
Strong light in my face
Poor weather
I was out of breath/shaking/heart was beating fast
I felt pressure from the team to short
Fault with weapon or sight
Other, explain briefly

**A LITTLE ABOUT THE HUNTING TEAM**

**28.** I am: A permanent member of the hunting team

Guest hunter I only hunt alone

**29.** How many years have you hunted with the team?

**30.** How many are in the hunting team?

**31.** How often (roughly) does the team hunt together each autumn?
Every weekend Every other weekend
Less often days in succession

**32.** Does the hunting team meet for:

Get-togethers on the ground? Parties/company?

Agreed shooting exercises? Planning the hunt?

Evening courses or the like on hunting?

**33.** How often has the hunting team met but not for hunting in the last year?

times

**34.** Has the hunting team together discussed the problem of misses and wounding in the last year?
Yes No

**35.** Is the reason for misses and wounding ever discussed in breaks during the hunt?

Yes No

**36.** Do you ever feel pressure to shoot from the team at times when you are unsure?

Yes No

**37.** Do have any other information of interest?

End