

A review of different options available for collecting and reporting cull data

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1. Introduction

1.1 The project brief clearly defines the current project as a report of different options available for collecting cull data, through review of

- i) licensing schemes operated in different countries,
- ii) cull return requirements (mechanisms for ensuring cull returns; data collected; regional or national systems for handling and storing such data),
- iii) requirements for voluntary or compulsory carcase tagging.

1.2 The project was carried out as a desk exercise and this report concentrates primarily in assessment of the different systems currently used in other European countries. Information was received from a total of some 24 countries; a complete list of information sources consulted in preparation of this report is included as an [Appendix 1](#) as also is a collation of the original reports received from each country

1.3 The current report attempts to

- i) identify licensing schemes operated in different countries,
- ii) review cull return requirements (mechanisms for ensuring cull returns; whether data return is voluntary or compulsory; data collected)
- iii) review different systems for handling and storing such data in different countries,
- iv) review the extent (and distribution within Europe) of requirements for voluntary or compulsory carcase tagging
- v) consider which (if any) of these provisions might to advantage be introduced in Scotland

2. Administrative systems

2.1 It is clear that there are marked differences in the way in which management of game animals (or hunting) is administered and regulated in different countries, with the degree of state control/intervention ranging from total to virtually none at all.

There is enormous variation in the mechanisms in place which determine the number of animals which may be shot (or indeed in many cases, must be shot) and whether this harvest quota, or required cull, is determined by state authorities or by the hunters themselves; there is similar variation in the way in which licences to kill game are issued and the extent to which such licences are tied to a given quota.

2.2 In order to understand this variation in licensing schemes as well as the (similar) variation in the requirement for submission of cull returns and detailed cull statistics, it is important to understand the context within which such licences are granted in each situation. This report therefore starts with a review of administrative systems used in different countries to control and 'structure' hunting activities in an attempt to provide such context.

2.3 Individual administrative systems are described for each country in Apollonio *et al.* (2008), (although for the purposes of the current report, relevant extracts are summarised in an Appendix); effectively they maybe considered to fall into 5 basic 'models' which are summarised below.

2.4 Model A:

The State (either at National level, or where there is a strong Provincial structure, at the level of semi-autonomous regions) sets clear objectives for management of game species. The appropriate Administrative Authority establishes within each region well-defined Hunting Units (or Game Management Districts) and determines for each a clear Management Plan. Within the context of its declared objectives and its assessment of current population trends, the Administrative Authority concerned sets harvest quotas for each GMD. In some cases management is directly by state-appointed hunters (although more generally this applies only to a proportion of the total land area (in National parks or whatever); more usually, the national or regional authority issues (sells) hunting licenses (to individuals or groups) with one hunting licence entitling the hunter to shoot one animal of predetermined species age and sex.

2.5 Such 'State' control of hunting is typified by (for example)

-Finland: 15 defined GMDs each with Management Plan.

-Denmark

-Switzerland. Cantons develop annual Management Plans and quotas; thereafter issue individual hunting licences each with a defined quota

-France, v. similar: done at Departement level

2.6 Model B:

The State (again, either at National or Regional level) defines Hunting Units (GMDs) and determines a clear Management Plan. State then i) manages direct as above (and again, where this occurs at all, it usually applies only to part of the land area, or a proportion of GMDs) or ii) devolves management of individual GMDs to individual landowners, groups of landowners, and approved Hunting Association or other leaseholder. After such allocation, the licence issues to the leaseholder is a 'global' licence up to the permitted or required quota established in the State-produced Management Plan. This model effectively describes the situation in

-Baltics: Latvia?

-Romania

-Slovenia : a 10 year Management Plan is determined by the responsible authorities at (District) level; GMDs are allocated to local Hunters' Associations, who must submit an annual management plan (including suggested annual quota) within the framework of this 10year Plan. These annual Plans however must be approved each year by the regional administration.

2.7 Model C:

The State, at national or (now more commonly), regional level determines GMDs but management is subsequently devolved to landowners, Hunting Association or other leaseholder. The Manager then produces a Management Plan (and suggests annual quotas), but production of such a plan is mandatory and the plan itself (and annual quota) must be approved by State administration. Once the submitted plan is approved, a 'global' licence is issued up to permitted quota. State regulation is still very apparent and in some cases devolution of management responsibility to the leaseholder is dependent on (compulsory) appointment of a professional game warden or game manager within each hunting district.

-Baltics: Lithuania

-Hungary

-Poland

-Austria [GMD must employ professional gamekeeper]

-Czech Republic [GMD must employ professional gamekeeper]

2.8 Model D:

The integration of individual landholdings to cooperatively managed Hunting Districts or Game Management Areas is initiated by groups of landowners/ Hunters' Associations (or equivalent)

who propose GMDs for approval. Hunting however may only be carried out within approved GMDs, and such GMDs remain a mandatory requirement. Once a GMD has been approved, the proposers must then submit a (mandatory) Management Plan for approval by administrative authorities and must submit proposals for harvest quotas (usually annually).

Proposals are scrutinised by the responsible State authority (usually Forest District staff, or regional Wildlife Boards) who may alter the proposals as they consider necessary; approval of the (annual) plan then implies approval of a 'global' licence up to the agreed quota (and may imply penalties if that quota is not met). Once again, in some countries it is mandatory for the 'syndicate' managing any given GMD to appoint a professional game keeper or game warden, who has responsibility for coordinating hunts and for collating harvest statistics/cull records and reporting them to the responsible authorities. This model describes the situation in

-Germany [GMD must employ professional gamekeeper] ??

-Slovakia

-Belgium

- The Netherlands... (up to a point. Hunting is not widespread in the Netherlands anyway. Roe deer, red deer, wild boar and fallow deer are fully protected and can only be hunted or culled if it can be demonstrated that this is necessary i) for reasons of public health and public safety; ii) in the interest of safety of air traffic; iii) to prevent damage to crops, cattle, forests, fishery or iv) to prevent damage to flora and fauna)

-Spain

-Italy

2.9 Model E:

Little state regulation or intervention. No mandatory organisation of landholdings into GMDs or requirement for a State approved Management Plan. Voluntary GMDs (if any at all). Game licences are issued to individual hunters (simply as licence to hunt) but no quota limit is set. Clearly this is the model which includes Scotland and other parts of the UK; to the best of my understanding, outside the UK only Sweden operates a similar system (and there only in relation to red deer, roe deer and fallow; far tighter control is exercised in relation to hunting of moose).

-Sweden (except in relation to moose)

-Scotland

-Eire

-England and Wales, NI (although we might note that here, under the recent Regulatory Reform Order, there is no longer even a need for a specific Game licence)

2.10 In conclusion we should note that a number of countries operate what we might best describe as "mixed models" - part of the land area administered by one method, part by another e.g. State devolves management of some GMDs in entirety with a 'global' quota, but retains others and within those issues 'individual' licences. Examples of such mixed models are:

- Norway: Most areas are controlled by Municipal Wildlife Boards which develop Management Plans and issues licences for defined quota to individuals or Hunter's Groups, but some areas leased in their entirety to syndicates (DMGs) to work to approved Management Plan [thus mixed A + C];

- Portugal also operates a mixture of Models B and C.

2.11 First, it is notable in how many countries elsewhere in Europe there is an actual mandatory requirement for the establishment of (large and biologically sensible) Game Management Districts which are clearly, in most cases, much larger than the area of one individual land-holding.

2.12 Secondly, it was to me quite remarkable to discover how widespread is a mandatory requirement for production of a formal Management Plan. In many cases the State itself determines that Management Plan (overall, or within individual GMS) and it is drawn up by Forest District staff or specific regional Wildlife Boards. Even where it is not actually determined by national or regional authorities, any submitted Plan is commonly critically appraised and must in the event be approved by the competent authorities.

2.13 Indeed it is notable how unusual is the UK within this wider framework: where there is no mandatory organisation of landholdings into GMDs or requirement for a State approved Management Plan and where game licences are issued to individual hunters (simply as licence to hunt) but no quota limit is set; to the best of my understanding, outside the UK only Sweden operates a similar system (and there only in relation to red deer, roe deer and fallow; far tighter control is exercised in relation to hunting of moose)

Licensing systems

3.1 From the foregoing, it is clear that there are in effect three distinct mechanisms for issuing a game licence: In some cases (where control of a given GMD is retained by the national or regional authorities) individual licences are issued to hunters or Hunters' Groups, as 'permits' to hunt within a given area. For the most part such quotas specify species, sex and age of animals (as well as the number of animals) which may be shot; more rarely simply a total number may be agreed. [This is also, in effect, the system operating in most States of the United States of America.] In some cases the licence determines for each species the maximal number of animals that the hunter is allowed to kill, but also stipulates the minimal number that he must harvest to regulate numbers and limit damage.

3.2 More commonly, where management of a GMD is devolved to an individual leaseholder or Hunters' Association, more global licences are issued; these however are issued within the context of an approved Management Plan with clearly defined (and agreed) annual quotas. For the most part such quotas are specified again by age and sex of animals to be culled but again in some circumstances (where harvests are specified within the context of a longer term Management Plan) simply a total number may be agreed. Since for the most annual quotas are determined to achieve specific objectives (maintenance cull, reduction of impacts etc) agreed quotas effectively define the maximum number of animals that the hunter is allowed to kill, but this is effectively also considered a minimum requirement to deliver the objectives of the Plan.

3.3 Finally (in Scotland!), licences may (unusually) be issued simply as the right to kill game, with no linkage to any defined quota; a licence is also required to handle, process or retail game (Game Dealer or Game Meat Handler), but even that requirement has now been dropped in England and Wales/ Northern Ireland.

Cull statistics and the requirement to make a statutory cull return

4.1 Once again, more detailed country-by-country information on specific requirements is offered in the Appendix. Here Table 1 offers a summary to show in which countries it is mandatory to submit to the competent authorities some form of cull return (whether this merely details numbers of animals shot of each species and sex, or provides more detailed information.) In most cases statistics and cull records must be returned to the licensing authority.

Table 1

Country	Regulation/Administration National	Regulation/Administration Regional	GMDs compulsory	GMDs voluntary	Management Plan Mandatory	Management Plan Voluntary	Quota set by Regional Authority	Quota must be approved by Authority	No regulatory control of quotas	Legal requirement for cull records	Other national scheme	No central cull records	carcase tagging required
Finland	Y	Y	Y				Y			Y			
Sweden	Y			Y		Y				*	X		N
Norway		Y				Y	Y			Y			N
Denmark	Y						Y			Y			N
Scotland						Y			X	**			Y
England etc									X	No		X	Y
Netherlands	Y		Y		Y			Y		?			Y
Belgium				Y	Y			Y		Y			Y
Germany		Y	Y		Y			Y		Y			
Poland	Y	Y	Y		Y		Y	Y		Y			N
Baltics	Y		Y		Y			Y		?			
Czech	Y		Y		Y			Y		Y			N
Slovakia		Y	Y		Y		Y			Y			N
Croatia	Y		Y		Y			Y		Y			Y
Austria		Y	Y		Y			Y		Y			Y
Slovenia		Y	Y				Y			Y			Y
Switzerland		Y					Y			Y			Y
Hungary		Y	Y		Y			Y		Y			Y
Romania	Y		Y		Y			Y		Y			Y
Portugal	Y	Y	Y		Y		Y			Y			X
Spain		Y			Y			Y		No		@	
France		Y					Y			Y			Y
Italy		Y	Y		Y		Y			No			Y

* Sweden: statutory return required for moose only. However, voluntary scheme coordinated by the Swedish Association for Hunting and Wildlife Management (cf. BASC)

** Scotland: DCS may demand cull records from individual estates/DMGs; numbers only
UK: Carcase tagging compulsory for animals passed to game dealer/game meat handler

@ Spain; compulsory but only in some regions

4.2 It is clear that in the vast majority of European countries some statistical return is compulsory (although the detail required may vary enormously (below) and many commentators question the accuracy of some of these returns). In England and Wales there is no such requirement. In Scotland there is no actual fundamental requirement to supply such information, but (as I understand it) DCS may request an annual cull return from anyone known to be culling deer and it is an offence not to comply with their request

Mechanisms for ensuring return and accuracy of cull data:

4.3 Where individual licences are issued by state or regional authorities to individual hunters, a record for all animals culled (up to the quota allocated under the licence) is supposed to be returned to the body issuing such licence. But it is very difficult to assess the accuracy of such return since hunters will of course ensure that returns match the quota allocated under the licence granted (and there is no obvious way of 'checking').

4.4 Thus

- a) if a hunter has shot more than his/her permitted quota this will not be admitted; numbers by age and sex on any return will be presented to match the quota allocated and more detailed statistics, if required (for weight, reproductive condition, antlers etc) will simply be presented for the 'correct number of animals declared.
- b) if a hunter has shot less than his/her permitted quota, this may be honestly represented if no penalties attach (and simply the licensing authority subsequently 're-lets' the shortfall under another licence to ensure that the total cull level is maintained). However in many situations, the licensing authority applies penalties if the required cull is not taken and in this case, cull returns may be inflated to avoid such penalty.

4.5 [Even where carcase tagging is mandatory, this does not wholly resolve the issue of accuracy. Simply animals taken in excess of quota will not be tagged or declared, while in the case of a shortfall on quota, surplus tags, where issued, can simply be disposed of. Only where some cross-check of all tags is maintained from issue through to Game dealer or final outlet, would such anomalies be detected, and I know of no country where such systematic checking is undertaken.]

4.6 Similar problems obtain in licensing schemes where global licence is granted to individuals, syndicates or Hunters' Clubs for management of game species within a defined GMD to an imposed or approved Management Plan.

4.7 In the majority of cases (but not all; there are exceptions) even where a general Management Plan is developed for a 5 or even 10 year period, most regulatory authorities still insist on approval of each year's quota on an annual basis. Since quotas may well be adjusted year on year dependent on census and actual cull taken the previous year, submissions for approval of quota for the following year almost all require simultaneous submission of a cull return from the current year. In principle, such a system provides some device for guaranteeing a cull report is received from each GMD in each year.

4.8 However, while some return may be anticipated, the accuracy may be again questionable, since it is apparent that continuation of the lease of a given GMD may be dependent on satisfactory performance (including reaching cull targets set in each period), while the size of future quota may itself be dependent on the apparent sustainability of current quota.

[In many cases formal census of actual population size or number is not attempted; management decisions are based on trends in harvest statistics. In this case to sustain a given sporting quota one might be tempted to declare a higher cull in any year than was actually taken].

4.9 Once again, there are few mechanisms for checking the accuracy of returns and carcase-tagging would only provide such a mechanism where some cross-check of all tags is maintained from issue through to Game dealer or final outlet. As far as I am aware such a system exists only in Slovenia!

4.10 In a small number of countries, allocation of hunting rights within a GMD to landowners or to a Hunting Association is conditional on appointment of a paid game warden or game keeper to each GMD. These professional staff are responsible (usually) for preparation of a Management Plan for official approval, for organising hunting activities within the GMD and for preparation of annual statistics at the end of the season. While once again this may simplify the 'chain of command' and ensure that one particular individual is responsible for submission of an annual return, it does not of course increase the certainty of accuracy of that return.

4.11 This problem was stressed by a number of my correspondents - and interestingly enough is perhaps one down-side of management or administrative systems which tend to 'over-regulate'. If the granting of the lease or concession of a hunting district is dependent on meeting certain targets, then statistical returns from the leaseholder are likely to be manipulated where necessary to match targets set. Even within those administrative models where individual licences are issued for particular quotas in State-controlled Departements (eg. France), my informant notes: "from personal experience, I know that the information is not worth the paper it is written on; I know of hunters making up extra roe deer as they didn't want to shoot any more and they have financial penalties if they don't".

4.12 One further anomaly which should be noted is that in a (small) number of countries - notably those which are federal assemblies of member States, or where individual Provincial administrations have very high autonomy (such as Germany, Austria, Italy), different regulations may operate in different autonomous regions; in such countries it is often impossible to collate national statistics since not all provinces/states may have mandatory returns. In such instances, comparison of cull records with targets established in any Management Plan can only be done at the level of individual provinces or GMDs.

Types of data collected:

5.1 Once again there is enormous variation in the detail of information collected in cull returns. At the lowest level, licence holders, or leaseholders of GMDs may be required to submit no more than a simple numerical return for each species of numbers of animals culled. In some cases this is not even subdivided by sex or age.

5.2 More commonly, and especially where there is a requirement for each carcase to be identified by a unique, numbered, tag, whose number is cross-referenced to the cull record, cull record sheets ask for more detail (as for example France: the record form asks for tag number, date, number of hunters, shot gun or rifle, lead shot or bullet, weight (weighed or estimated), dead or clean, male/female, antlered or not, in velvet or not, antler height, female lactating or not).

In Belgium, the form asks for: date and place where the animal was shot, person who shot the animal, sex and age class of the animal and eviscerated weight. Additional information such as the jaw length, number of embryos, kidney fat index and on the antlers can be added but is not mandatory. In Finland, after the end of the hunting season, each harvested animal has to be reported to the local GMD. This report must include information on the ungulate sex, age (adult/calf), site of the kill and antler tine number. By contrast in Norway: hunters are obliged only to submit reports of the number and sex of hunters, and the annual number of cervids and small game harvested.

5.3 Perhaps the greatest level of detail is asked for in those countries adhering to a more Germanic system. In Austria, Hungary, Slovenia, Croatia (for example), and also Norway, leaseholders of each GMD are required to submit to the regional authorities a reports not only on numbers of animals culled for each species (by sex and age) but are also required to submit a return of natural mortality, numbers of animals killed in road traffic accidents, even in some cases to estimate losses to predation (see ‘A review on data on natural mortality of red and roe deer populations). Standard proformas are appended here for Hungary, Austria and Portugal by way of illustration.

5.4 Once again however my informants advise that there is little ‘control’ for the accuracy of such reports. Once again I quote verbatim, from Professor Nahlik (Hungary):

The picture is somewhat complicated: I think one can probably rely on cull data of red deer, but not on those of roe deer. After making some (subjective) estimations myself of likely cull totals it is apparent that only approximately half of that total appears in the statistics. The other half are the so called rucksack roe deer, which ends in the kitchen of legal and non-legal hunters. Regarding red deer maybe some young stags were reported as hinds, sometimes it occurred that they were reported without really being culled (just to fulfil the instructions of the hunting plan).

There are also problems with natural mortalities. Not only, clearly, is only a small percentage of these ever actually discovered and thus reported to the authorities, but in addition even such reports are dubious: **hunters are not interested in reporting natural mortalities because they will be deducted from their hunting quota for the following season.”**

5.5 In addition to these mandatory cull recording systems, we should note that in some countries there are voluntary systems for data capture. In Sweden, for example, the Swedish Association for Hunting and Wildlife Management has collected bag records on all game species from its members since 1939. In other areas again, while there is no national, or even regional scheme operating, particular user groups may maintain detailed records (as for example the Forestry Commission or the Ministry of Defence/Defence Deer Management); while these do not offer comprehensive coverage and are thus not suitable for generation of estimates of, for example, a figure for total *numbers* of animals which may be being culled nationally, nonetheless such coordinated record schemes are often extremely detailed and may provide useful ‘sample’ datasets for interrogation in seeking answers to more specific biological questions.

Data handling and storage

6.1 As noted above, very few countries have developed explicit mechanisms for cross-checking or validating data received (although in Hungary, the Czech Republic and a number of other, more traditional, Germanic countries, antlers of all male deer must be retained and presented for CIC scoring)

6.2 Systems for collecting and collating data depend largely on the licensing system itself and whether or not licences (to individual hunters, or more ‘global’ licences for management of allocated GMDs) are issued by the Authorities at National or Regional level.

6.3 Where licences are issued by a national authority, returns are made directly to that national body (e.g. Denmark, Portugal). Where regional administrations are responsible for issuing individual licences (Finland, Norway and Sweden for moose, Switzerland, France) or approve the Management Plans and annual quotas of devolved GMDs (various countries), returns are made to that provincial authority and may (or may not) subsequently be collated nationally.

6.4 In France for example: hunters must submit a record for each animal culled (linked to the carcass tag number) to the local Federation Departementale des Chasseurs (one for each French Departement). These statistics are subsequently forwarded by each Departement to the Union Nationale des Federation des Chasseurs and then the Office National de la Chasse et de la Faune Sauvage for them to collate national statistics. A similar system operates in Switzerland, and (for devolved Management Areas with 'global' quotas) in for example Austria, Germany, Croatia, Hungary, the Czech Republic etc. [In Hungary for example, collection of data is coordinated by the county hunting authorities, who then forward the data to the National Game Management Database of the Ministry of Agriculture and Rural Development. An essentially similar system operates in Poland, although here the national collation, rather as in Scotland, seeks only information on numbers culled and does not retain the detail presented in reports at GMD level].

In Italy, by contrast, in those Provinces where data recording is mandatory, data are submitted to the Provincial Authority; but since not all Provinces require cull records to be submitted, there is no national 'compilation' of regional records.

6.5 In a number of countries, cull statistics (at least at the level of numbers of animals culled, by species age and sex) are published (usually as web-based databases). National databases are published for example in Norway, Denmark, Germany, Austria the Czech Republic, Slovakia, Hungary, Slovenia and Croatia *inter alia*, although as has already been noted, publication of the statistics may tend to give an illusory impression of accuracy.

6.6 In practice relatively little use may be made in any country of these national statistics (except perhaps in Scandinavian countries in relation to moose harvest levels). It would appear that far more note is taken of statistics compiled at different regional levels and more specifically still at the 'source' level of individual Hunting Districts or Game Management Districts.

6.7 Here cull records are primarily used to check that managers have achieved (and not exceeded) target quotas - although as above (4.8, 4.11), because of the lack of an ability to check the accuracy of returns submitted, such agreement is almost certainly self-fulfilling.

6.8 In many countries (as noted 4.8) there is no formal mechanism or system for routine population census of any species of large ungulate. **Thus, in a significant number of countries, bag records are also used to assess population size and trend.**

Carcass tagging

7.1 Table 1 summarises those countries for which carcass tagging is mandatory. It is clear from the table that this is a widespread requirement particularly in countries with a more Germanic management tradition. It is required in the UK or Republic of Ireland for animals passed to a game dealer or approved game meat handler.

7.2 Carcase tagging is required in Norway only for wild forest reindeer, but not for moose, red or roe deer and is similarly not required in Sweden or Denmark. Tagging is **not** required in Portugal and Spain, (although mandatory in France); it is required in some but not all provinces of Italy. To the best of my knowledge it is required in some states of the Federal Republic of Germany but not all.

7.3 Otherwise it is required through most western and central European countries, with the exception of the Czech Republic, Poland and Slovakia. Carcase tagging is thus mandatory in France, Belgium, the Netherlands, Hungary, Austria, Switzerland, Slovenia, Croatia, Romania and some provinces of Italy. While currently not mandatory in Portugal it will become so from next year. By contrast carcase tagging was a requirement in Poland until comparatively recently but is now no longer compulsory. As my informant told me: "In Poland hunters are never bored. Law changes every few years!"

7.4 I confess my own surprise that it is not now universal since, under the provisions of the new Game Meat and Hygiene Regulations, I understood it was now necessary to provide information sufficient to ensure traceability of all carcasses submitted for human consumption.

7.5 In Scotland, I understand that it is a legal requirement for all carcasses sold through a game dealer (**Approved Game Handling Establishment (AGHE)**) to be tagged and accompanied by details of where and when shot. In practice this means that carcase tagging is increasingly widespread although not universal.

Application to Scotland

Administrative systems and licensing: approval of annual quota

8.1 It is clear that in the vast majority of continental European countries, organisation of adjacent land-holdings into formal (and approved) Game Management Districts is a mandatory requirement, licenses for hunting are entirely linked to management within these larger units (whether those Units themselves are determined by the State or by the Stakeholders themselves).

8.2 One might perhaps question whether such mandatory requirement is strictly necessary since the entirely voluntary organisation of neighbouring landowners into voluntary Deer Management Groups, at least in the north and west of Scotland, seems to mimic this structure quite well and deliver a similar spatial scale of collaboration. However we might note that the voluntary system does not work so well in the south of the country (and is virtually non-existent in England and Wales)- largely due to different patterns of land-ownership and the smaller size of individual holdings, resulting in the need for accord between very much larger numbers of owners/ stakeholders. Further, the entirely voluntary nature of Scotland's DMGs perhaps makes actual regulation or enforcement of regulations rather more difficult.

8.3 I myself am enormously impressed by the number of countries where there is a mandatory requirement for a detailed Management Plan with clearly definition of objectives and a detailed (and justified) harvest or cull plan, as well as surprised by the number of countries in which such cull plans must be approved *each year* by the competent authority. The statutory authorities in these countries clearly have more resources available to them than does the DCS, for the time commitment in preparing such Management Plans or reviewing the submissions of others, as well as annual assessment of proposed cull quotas must be considerable!!

Nonetheless there is something to be said for imposing a requirement for such a Plan, and generating some mechanism for policing that Plan in some way to ensure that targets are met and the management is truly sustainable.

8.4 I was especially impressed by the system in Finland where, I am advised:

“Each GMD has an annual meeting with the most important local interest groups related to ungulate populations, e.g. representatives from forestry, agriculture and traffic organisations, local hunters’ associations. In these meetings, different parties discuss the current status of ungulate populations and the level of ungulate related damage and set a common goal for the density of ungulate populations. On the basis of estimates of populations size, GMDs then determine the hunting quota appropriate within the GMD that season.”

While it is acknowledged that in the Finnish system GMDs are actually State-determined and State administered (Model A), rather than direct analogues of our own voluntary Deer Management Groups, the breadth of consultation with other interest groups is commendable.

8.5 We might further note the practice in many countries of imposing penalties if hunters/managers exceed the allotted or agreed quota (thus potentially compromising sustainability of the population) or, alternatively if managers fail to meet agreed targets (thus potentially compromising other land-use interests by failing to control populations at levels where damage to agriculture, forestry or conservation habitats is kept at tolerable levels).

8.6 These penalties may be by payment of an actual direct fine to the administrative authority responsible, or (in many countries) may be imposed in a more subtle way by making those responsible for management of a given GMD directly responsible for payment of compensation for damage caused to agriculture or forestry (state or private) within that GMD.

8.7 In such a wider context it is clear that management of deer populations in Scotland is certainly not over-regulated by comparison to many European neighbours.

8.8 However, inevitably, there are enormous constraints on the degree to which current administrative systems could be changed, without considerable opposition and without fairly fundamental changes to the law to remove long-standing rights and privileges of private land-ownership. In effect change is constrained by lack of tradition of regulation and a land-law system where the individual owner has in effect the final say as to the management of deer on his land, unless those deer are actually proven to be causing damage to natural heritage interests (largely restricted to designated sites) or posing a threat to public safety.

8.9 I note however that the transition from (current adherence to) Administrative model E (paragraph 2.9) up one ‘stratum’ to Administrative Model D... is not such a huge step: with “ The integration of individual landholdings to cooperatively managed Hunting Districts or Game Management Areas initiated by groups of landowners/ Hunters’ Associations (or equivalent) who propose GMDs for approval but with such GMDs (DMGs) now a mandatory requirement.”

Further, within such a structure

“ Once a GMD has been approved, the proposers must then submit a (mandatory) Management Plan for approval by administrative authorities and must submit proposals for harvest quotas (usually annually). Proposals are scrutinised by the responsible State authority who may alter the proposals as they consider necessary; approval of the (annual) plan then implies approval of a ‘global’ licence up to the agreed quota (and may imply penalties of that quota is not met).”

8.10 While under such a model the ultimate sanction operated in some countries (refusal to award quota in the future, or withdrawal of an existing hunting licence or longer-term lease) is clearly inappropriate for failure to meet targets agreed, more direct financial penalties might be considered (straightforward fines as in France, applied to individual Estates or at the level of DMGs) and/or consideration could be given to the alternative model of making DMGs liable for direct compensation of damage caused by deer to the land use interests of other private or public landowners within the DMG area (agriculture, forestry, conservation interests or other damage to the public interest)

8.11 While this would be a significant departure from the current under-regulated situation, it would have a number of possible advantages. I've no doubt it would be staunchly opposed as a gross infringement of individual rights (although in practice, appeal to a European court would simply serve to establish that this is the norm elsewhere!).

8.12 Its greatest drawback is perhaps the administrative burden which it would impose; the additional manpower and resources required from Government to set up the structure and implement it, would be considerable, would be extremely expensive - and would thus be unlikely to be considered cost-effective in terms of actual benefits delivered.

8.13 Yet without some such change, under the existing system there is little room for intervention in management or enforcement of changes of management on privately owned Estates towards national or regionally-determined targets.

Carcase tagging

8.14 In Scotland, I understand that it is a legal requirement for all carcases sold through a game dealer (**Approved Game Handling Establishment (AGHE)**) to be tagged and accompanied by details of where and when shot (7.4). In practice this means that carcass tagging is increasingly widespread although not universal. I think it likely that it will continue to become increasingly common and would see no need to make it mandatory. Indeed there is little evidence from other countries where it is compulsory to suggest it improves accountability, or accuracy of cull records returned.

Cull records:

8.15 As I understand it, there is no legislation in Scotland (nor in England/Wales/Northern Ireland) which renders it obligatory to volunteer information on animals shot. However, DCS can request routine annual cull returns from anyone and it is an offence not to comply with such request. Any licence/ authorisation they issue e.g. OOS/ nightshooting is usually issued with a "cull return" condition - again it is an offence not to comply. The system does not however guarantee comprehensive return of data for all deer culled since such return depends on whether DCS has identified the person / estate shooting and made a formal cull return request.

8.16 Such returns also merely detail the number of individuals (by sex) or each species of deer shot on a given holding both in season and out of season. No further information is sought, although as noted many organisations (FCS, MoD) as well as many individual Estates do keep far more comprehensive records. With the recent changes in the Game Regulations (7.3 above), requiring greater accountability and traceability of carcases, the number of individual estates now maintaining fairly detailed records has greatly increased. Standard checksheets are offered by most Deer Management Groups to member Estates in an attempt to standardise record keeping.

8.17 I myself know relatively few stalkers who do not record for each individual shot at least - Species, sex, date, location, estimated age, hind and/or larder weight, body condition (commonly kidney fat) and carcass tag number. Most also record number of antler points of males, and for females, reproductive status (milk/yield; pregnant/not pregnant) and many make notes of obvious physical deformity or signs of disease.

8.18 Under current provisions it is at present incumbent on DCS to identify those individuals or estates culling deer and ask for information. It seems reasonable to suggest that it might be appropriate to make such return mandatory, perhaps as a condition of the issue of a game licence.

8.19 Of course there will be a certain number of animals shot illegally, or shot and not recorded (Professor Nahlik's "Rucksack Roe") but this will happen under any system of regulation (and clearly does in other countries, however 'tight' their apparent protocols). Even carcass tagging only ensures legality of (and numerical accounting for) animals passed to Game dealers and not those destined for home consumption or private sales.

8.20 Current systems for collection of carcass data in Scotland are incomplete and yield only partial data on numbers of animals culled - which are in themselves not of great utility unless cross-referenced to some defined management objective. However, the industry itself is very supportive of the maintenance of some system of more detailed data recording if data capture was more comprehensive and if actual data recorded were specifically targeted to answer explicit questions about population size, productivity and trend. [DCS seminar 20th November 2007]. There is a need to identify what specific data might be useful, towards answering what key questions, but it would appear that the current voluntary submission of data through DMGs is an acceptable mechanism.

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INFORMATION SOURCES:

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