



ADVICE TO THE DEPARTMENT OF CONSERVATION IN DEVELOPMENT OF THE TAHR CONTROL OPERATIONAL PLAN 2023-24

JANUARY 2023



Game Animal Council
NEW ZEALAND

Development of the Tahr Control Operational Plan (TCOP) 2023-2024

Advice to the Department of Conservation from the Game Animal Council, pursuant to the Game Animal Council Act 2013, Section 7(1)(f) and (g), and the functions of the Tahr Plan Implementation Liaison Group (TPILG).

Context

The following advice occurs at three levels:

1. The strategic level, which focuses on principles and priorities.
2. The management level, which includes advice on how control effort should be allocated across tahr management units. More specific advice on control operations at places within the management units may be provided by the NZ Tahr Foundation, the NZ Deerstalkers Association and others.
3. Future development level, which focuses on work that should be undertaken during the 2023-24 operational period to facilitate advice and improve future management.

The Game Animal Council's (GAC) mission statement is "Sustainable management of game animals and hunting for recreation, commerce and conservation."

Pursuant to that mission statement, we recommend using the following principles and priorities to guide compiling the Tahr Control Operational Plan 2023-2024 (TCOP).

Principles and Priorities

Principle 1: Have regard to impending changes to the overall tahr management system.

The HTCP 1993 has never been implemented in its entirety, nor is full implementation of the HTCP advisable given recent advances in knowledge, resource use, science and technology. The 2023-24 TCOP coming year should recognise that (i) the HTCP is out of date, and (ii) the TCOP, in accordance with the purpose of Te Ara Ki Mua, should strive to apply and trial sustainable adaptive management with the potential to improve tahr management in the long term.

Principle 2: Focus official control where it will have the greatest conservation benefit.

This principle requires effects-based tahr management, concentrating official control effort on locations where control provides the greatest conservation benefit, informed by science wherever possible. Note, current impacts do not necessarily indicate significant potential future impacts without up-to-date information on resident tahr

populations and the resilience of the local environment to those populations. This difference between tahr density and potential impact can be due to long-lasting effects from previously high populations, continued population reduction effort, potential range expansion, susceptibility of the vegetation to tahr abundance, and the period required for environmental recovery.

- Rather than seeking to cover the whole tahr range, control should be focused on locations where tahr are:
 - (i) outside the feral range
 - (ii) approaching feral range boundaries outside management units
 - (iii) likely to cause the most significant adverse environmental effects
 - (iv) in high concentrations, and
 - (v) hunter activity is lowest.
 - In the short-term, tahr population management must necessarily be based on limited information about tahr resource use, abundance, and effects at place, including expert observations from the hunting sector and others, and submissions to the TCOP from the hunting sector and others.
- Population control should be based on understanding of biological population dynamics and reproductive potential.
 - Outside the feral range and within National Parks all females should be the focus of control effort as they are the reproductive potential of the population. Focused control of females maximises long term conservation benefits and reduces required future control.
 - Inside the feral range high concentrations of adult females should be the focus of control as they have higher potential for causing significant impacts than do small groups, and adult females have the higher reproductive potential than do juveniles (juvenile tahr have high natural mortality and juvenile males have zero reproductive potential). Catch per unit effort (CPUE) is not an indicator of current or potential tahr abundance or environmental effects. Consequently, CPUE should not be used to prioritise areas for tahr population reductions.

Principle 3: Have regard to recreational hunting, guided hunting, AATH and WARO

Coordinating effort across the tahr range is key to maximisation of benefits from management. Appropriate coordination requires understanding of tahr resource use across their range and recognition of hunter and landholder contributions within the overall tahr management system. Reduced tahr abundance has a commensurate effect on the number of tahr available for the hunting sector: Trophy bulls (males) are the primary motivator for tahr hunting participation by most recreational and essentially all guided hunters. Fewer bulls can reduce recreational hunter participation, with a commensurate effect on incidental female harvest, sympatric species harvest and hunter contributions to conservation initiatives within the tahr range. For professional guides, fewer bulls cause loss of income, increased costs and creates conflicts with recreational users. For WARO, female populations in high enough concentrations in accessible locations are required for financial viability.

- Official control within management units, except MU4 (see below), should target identifiable females only and avoid targeting identifiable male and juvenile tahr.
 - Juveniles include the future bull resource, thus targeting juveniles has a long-term detrimental impact on recreational and guided hunting.
 - Mature females have the highest reproductive potential, thus reducing mature female populations results in long-term conservation benefits and reduces ongoing control requirements.
- Official control within management units should be focused on areas most inaccessible to hunting (recreational and commercial) to avoid replacement of hunting effort by official effort.
 - For recreational/guided hunting this means official control should avoid road ends, easily traversable landscapes and around huts and tracks.
 - For WARO this means official control should avoid road ends and landscapes where carcass recovery is easy/viable.

- For all hunting, this means official control should avoid bulls.
- Mature males will be in high demand by professional guides during the 2023-24 operational year, demand having accumulated during the border closures. Recent reductions to juvenile and nanny abundance will limit future bull recruitment. To provide for increased demand and to reduce conflict with recreational users:
 - AATH should be encouraged and facilitated to operate as much as possible in areas of lowest use by recreational/guided hunting activity.
 - Official control should target only female tahr and should avoid males and juveniles across all management units, except MU4 (see below).
- AATH harvest of both tahr and chamois invokes female tahr harvest offsets. It is recommended that offsets compiled during the AATH 2022/23 season are subject to further discussions after the conclusion of this TCOP year, perhaps at the midpoint review. Offsets currently are not aligned with official control measurement outcomes, e.g., official control is based on hourly effort and AATH offsets are based on the number of tahr controlled. There should be the facility for AATH offset outcomes to be aligned with official control outcomes to:
 - Establish fairness within a reduced tahr population system, it will become progressively more expensive for AATH operators to meet offset requirements.
 - Hourly allocations would allow targeting of areas with highest conservation outcomes which do not always align with areas of highest tahr abundance, and;
 - provide consistency in the expense incurred by AATH harvest.
 - Hourly allocations can be established by reasonably estimating the helicopter time required to target 5 female tahr.
 - Be directed to complement other management, e.g., official control and recreational and guided hunting, and;
 - allow WARO to be undertaken for offsets wherever possible, thus subsidising WARO costs and maximising resource usage when tahr abundance is relatively low.
- WARO permits should be issued one year in advance for areas that are viable for transport and that hold high concentrations of female tahr after the tahr rut to:
 - Provide market certainty for WARO operators and processors.
 - Enable easy recovery e.g., while snow is on the ground.
 - Complement other management, e.g., official control and recreational and guided hunting.
 - Reduce conflict with recreational/guided hunting activities.
- All females and juveniles within National Parks should be targeted in official control as:
 - Females are the reproductive driver of the population, thus focused effort targeting females has long term conservation benefits and supports maintaining tahr populations as low as is possible [National Parks Act 1980, section 4 (2)(b)].
 - Juveniles include future female populations, thus targeting juveniles concurrently with mature females may support maintaining populations as low as is possible for longer [National Parks Act 1980, section 4 (2)(b)].
- Males within National Parks should not be targeted in official control as:
 - Tahr are polygynous i.e., the abundance of males does not significantly contribute to future tahr abundance.
 - Males will be removed through natural mortality and hunter activity over time, thus satisfying section 4 (2)(b) of the National Parks Act 1980 at no cost to the NZ taxpayer when combined with focused control of female populations.
 - Male tahr presence attracts and encourages continued hunter activity within National Parks, which is beneficial to the management of sympatric species (indigenous, valued introduced, and pest).
 - Male tahr presence ensures that hunters “receive in full measure the inspiration, enjoyment, recreation, and other benefits” [Section 4 (2)(e) with consideration to section 4 (2)(b) National Parks Act 1980].
- Official control can be undertaken aerially or on the ground. The determinants of operational type should be as follows:

- In inaccessible terrain with open vegetation types, aerial control should be employed,
 - Conducted between August and November to reduce conflict with hunting and for animal ethics reasons, e.g., before tahr kids are born.
- In areas with or adjoining (i) thick vegetation and (ii) traversable landscapes, ground-based control should be employed,
 - During ethically appropriate times, e.g., Spring pre-parturition or March when kids are self-sustaining.
 - Targeting mature females only, avoiding males and juveniles, except within MU4 where females and juveniles are to be targeted (see above).
 - Hunter-led management should be prioritised to encourage hunter participation and reduce government operational costs.
 - Second priority is control by approved professional operators, with clearly defined expectations that align with the principles outlined above, and with adequate reporting.

Principle 4: Translate “encouragement of recreational/guided hunting” into measurable outcomes.

Previous TCOPs have not identified methods for DOC encouragement of recreational/guided hunting. While the Department has provided online maps of bull tahr observations from aerial operations, there is some delay in producing the maps (which is important because bull tahr move seasonally), and other factors affect recreational participation, particularly access. The GAC recommends provision of resources to improve hunter access.

The contribution of recreational hunting to tahr population management is not known but is likely to be significant. The GAC recommends the Department supports in principle the GAC’s design and testing of mechanisms to recognise hunter contributions to support future management decisions.

Principle 5: Support MU1 Hunter-led management

The MU1 hunter-led management programme will be initiated and further developed during the period of this TCOP. As part of programme development, and to assist the transition to hunter leadership, the GAC will take leadership in consultation with others to design and implement tahr management in MU1. Some hours of official control and/or helicopter support should be allocated to support development and implementation of the programme.

Principle 6: Enable flexibility within the TCOP

As set out in Principle 2, official control should be focussed where it will have the greatest conservation benefit. It is also desirable to coordinate all control methods and use them where they will be the most effective and cost efficient. The TCOP should be adaptive so it can respond to new information and learnings throughout the operational year. There should therefore be the facility for DOC in consultation with the GAC to adjust the amount and allocation of resources available during the operation of the TCOP. The mid-point reviews have been extremely productive, resulting in improved allocation of the limited control resource, reduced conflict between ground hunters and aerial control operations, and are gaining enhanced engagement from the hunting community. The GAC strongly supports continuation of the mid-point review and supports more regular reviews as appropriate.

Order of priorities for allocation of official tahr control on public conservation land in 2023/24

1. All tahr outside the Feral Range.
2. All tahr in exclusion zones.
3. Female and juvenile tahr adjacent to feral range boundaries outside the management units.
4. Female and juvenile tahr within MU4.
5. Mature female tahr within management units where they are having the most significant adverse environmental effects.

Allocation of Control Effort Across Management Units

OSFR – Outside of feral range and exclusion zones.

INFROMU – Inside feral range but outside management units.

Table 1 Proposed allocation of % hours of official control.

Management units	Allocation 2022-2023 % Hrs	Allocation 2023-2024 % Hrs	Reasoning	Notes	
OSFR	33%	33%	Maintain highest effort outside feral range to prevent range expansion.	Establish a more comprehensive judas tahr network to help detection.	Facilitate official recognition of hunter contributions.
INFROMU	7%	10%	Area of least focus to date and bordering OSF risks range expansion.	Females and juveniles only. Increased focus on preventing spread OSFR, areas most at risk.	
MU 7	0%	0%	Sector indications are that tahr populations in this management unit remain very low.		
MU 6	12%	12%	High concentrations of mature females remain in some places.	Official control focus on known concentrations, include ground-based mechanisms.	
MU 4a	23%	20%	Higher hours than other MU's due to difficult terrain. Slightly decreased allocation as sector observations indicate female population is now low.	Hunter focus on males/official control focus on females and juveniles. Include ground-based tools.	
MU 4b	7%	7%	Less effort is required to achieve the same level of control as MU4a because the landscape is easy to control by helicopter. Tahr abundance is very low.	Hunter focus on males/official control focus on females and juveniles. Incentivise AATH focus.	
MU 2	5%	5%	Few pockets of higher concentrations of mature females.	Official control focus on mature females in large groups. Include ground-based tools.	
MU 5	3%	3%	Few pockets of higher concentrations of mature females.	Official control focus on mature females in large groups.	
MU 1	7%	3%	A small allocation of official control is required to support hunter-led management.	Allocate as required to support hunter-led management.	

MU3	3%	7%	High hunters use area. Minimal official control is required to support hunter contributions in inaccessible areas.	Official control focus on mature females in large groups in areas inaccessible to hunting.
Totals	100%	100%		In all facilitate official recognition of hunter harvest.
ZIP/OSPRI/WARO				Tahr carcasses used to support these operations should be obtained from areas of high concentrations of females. Females only. Recognise contribution to MU.

Future Development

The GAC supports

- Trialling the Department’s new vegetation and herbivore monitoring regime, which is an important step towards science-led, effects-based tahr management.

The GAC recommends

- Communicating the vegetation monitoring regime in detail to provide better understanding of methods, outcomes, and opportunities for hunter participation.
- The Department, in principle, supports the GAC’s development and testing of mechanisms to quantify recreational harvest for the purpose of supporting future management.

The recommendations outlined are provided to support the 2023/2024 TCOP operational year only. Further recommendations may be made as the year progresses, e.g., following receipt of the draft TCOP, following the March longer-term management planning meeting and at the mid-point review.