



Targeted Harvest Report 2023

PURPOSE: THIS REPORT WAS COMMISSIONED BY THE NZTF MANAGEMENT COMMITTEE 2023 TO OUTLINE THE OPERATIONAL RESULTS OF THE GROUND-BASED TARGETED HARVEST OF FEMALE TAHR POPULATIONS IN THE MAKAWHIO AND MAHITAHU VALLEYS. BACKGROUND

The New Zealand Tahr Foundation (NZTF) is a not-for profit organisation established in 2016 with the purposes: education, co-ordination among stakeholders, to manage Himalayan Tahr and acquire “*Herd of Special Interest*” (HOSI) status for the Tahr herd via the Game Animal Council Act 2013.

A “HOSI” designation enables the management of game animal populations, subject to adequate environmental protection, for the purposes of hunting.

However, the NZTF’s key undertaking since 2018 has been to minimise the adverse impacts on the hunting sector of DOC’s Tahr population reduction efforts, by advocating for effort to be directed and coordinated so that cultural and recreational values are maintained as far as possible.

To achieve this goal and to reduce pressures on biodiversity, as outlined by the Te Mana o te Taiao Aotearoa Biodiversity Strategy 2020, effective tahr population management tools must be applied based on landscape attributes, animal behaviors and resource values at place.

A significant number of tahr have been removed from the feral range and exclusion zones over the past 2-3 years following the directive of the Minister of Conservation to reduce tahr numbers closer to the intervention densities outlined in the “*Himalayan Tahr Control Plan 1993*” (HTCP).

However, this has largely been undertaken by aerial search & destroy control operations which are not effective in scrub and bush areas, a significant component of tahr habitat in South Westland.

Furthermore, sustained long term helicopter pressure from aerial control may increase tahr occupation of bush & scrub habitat, increasing the tahr impacts on biodiversity in these areas. It is apparent that management of tahr populations to reduce impacts on bush, scrub & fringe alpine vegetation requires ground-based hunting effort.

In January 2021, the NZTF identified pockets within the HTCP Management Unit 6 - Landsborough, specifically the Makawhio / Jacobs Valley, West Coast, where tahr browse impacts to thick vegetation and high female tahr densities were observable.

The NZTF undertook a successful female tahr population management

operation, “targeted harvest trial,” during March 2022.

MANAGEMENT PLAN

The New Zealand Tahr Foundation (NZTF) and the Department of Conservation (DOC) entered into a 3-year Community Agreement in February 2022 (DOCCM-6920217).

As a requirement of the Community Agreement the NZTF will consult with DOC South Westland District staff and provide the Director General an annual Tahr Management Plan (TMP).

NZTF and DOC representatives met in Haast on September 7, 2022, to discuss the results of a successful NZTF-led tahr population management trial in the Makawhio / Jacobs valley in March 2022 and to discuss a plan for the year ahead.

A plan for 2023 was proposed with the purpose of targeting areas where tahr population management is further required in the Makawhio / Jacobs Valley, and to extend NZTF-led tahr population management to a single site at the lower Mahitahi ballot camp site and the Troyte catchment of the Karangarua, in Westland National Park.

The 2023 management plan aimed to build on the successful “targeted harvest trial” establishing sustained hunter-led tahr population management in the Makawhio / Jacobs Valley and other recreationally important valleys

within the South Westland district to pursue both biodiversity and hunter interest objectives.

OPERATIONAL PLANNING

Ground-based hunts of 3-5 days were to be undertaken at each of the sites listed below. Nanny group sizes and distribution recorded, and vegetation status subjectively assessed at each site.

Tahr populations observed were to determine if further population management is required in the year following at sites.

MAKAWHIO / JACOBS

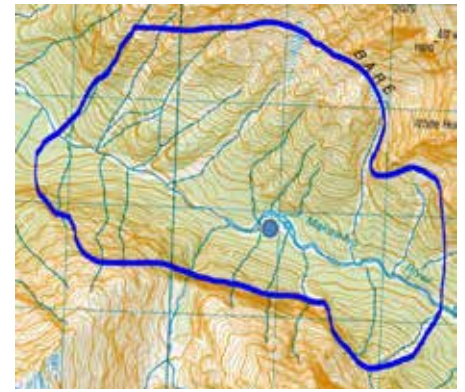
One operation at each site (upper and lower landing sites). The lower site is a challenging place to hunt, minimizing scent dispersal is important for success.

The upper site is less challenging to hunt but covers a much larger area, suitable for more hunters.

Timing: Late October/early November when tahr are out actively feeding down low (pre-kid).



Makawhio / Jacobs - Upper site.



Makawhio / Jacobs - Lower site.

March as an alternative, subject to volunteer availability and weather.

- Upper site - 3 hunters (1 helicopter load).
- Lower site - 2 hunters (1 helicopter load).

MAHITAHİ

One operation initially as an exploration. If numbers warrant a second visit this may be undertaking as a follow up.

Timing: Late October/early November simultaneous with the Jacobs. March as an alternative, subject to volunteer availability and weather or for a follow up if required.

- Lower site - 3 hunters (1 helicopter load).



Mahitahi - Upper site.

TROYTE

One operation initially as an exploration. The valley was previously identified as a bull stronghold and an important recreational hunting area, but nanny populations have increased displacing bulls.

Timing: March to provide enough time for planning and permissions.

- Single site - 3 hunters (1 helicopter load).



Troyte - Single site.

MANAGEMENT TARGETS

As per the NZTF Standard Operating Procedures only identifiable nannies were to be shot. To achieve the management targets hunting parties were to include at minimum 2/3 experienced hunters. Two person parties will be experienced hunters only.

SEASONAL MILESTONES:

- Reduce adult female tahr populations in the Makawhio valley (lower site only) and Mahitahi valley as far as possible due to the bush clad environment and difficulty

Results:

Operation	No. of Hunters	No. of Hours	No. of Hunter Days	Harvest	
				Harvest Total	Av. Per Hour
Makawhio Lower	2	45	5	82	1.8
Makawhio Upper	2	64	7.1	167	2.6
Mahitahi	3	86	9.1	163	1.9
Total	7	195	21.2	412	2.1

- hunting these areas.
- Reduce adult female tahr populations in the Troyte valley as far as possible due to the National Park land status.
 - Reduce adult female tahr group sizes to five in the Makawhio valley (upper site only) to reduce impacts from large groups and to maintain recreational values.

Note: the window for spring management in November is short due to oncoming kid drop by nannies, because it is inhumane to shoot nannies once kids have dropped as the kids would starve.

November can also be subject to wet spring weather, though the seasons are unpredictable. Seasonal milestones are to be met by the end of March leaving April free for hunters and tahr time to settle before the rut ballots begin and commercial activities are permitted.

GROUND-BASED MANAGEMENT CRITERIA

- Mature nannies only to be shot.
- Good shot placement.
- Non-toxic (lead free)

- ammunition to be used.
- Track logs to be recorded during hunting or drawn on map after each hunt should equipment failure occur.
 - Record locations and numbers of tahr harvested onto the NZTF App or GPS.
 - Photograph kills able to be accessed without risk or significant time wasting
 - Record numbers and approx. age /sex of observed of non-target animals.
 - Vegetation assessments to be conducted using the NZTF App or Camera.
 - Volunteers are encouraged to salvage meat where possible and sensible and where it does not impact significantly on hunting efficiency.

TAHR / VEGETATION MONITORING ACTIVITIES

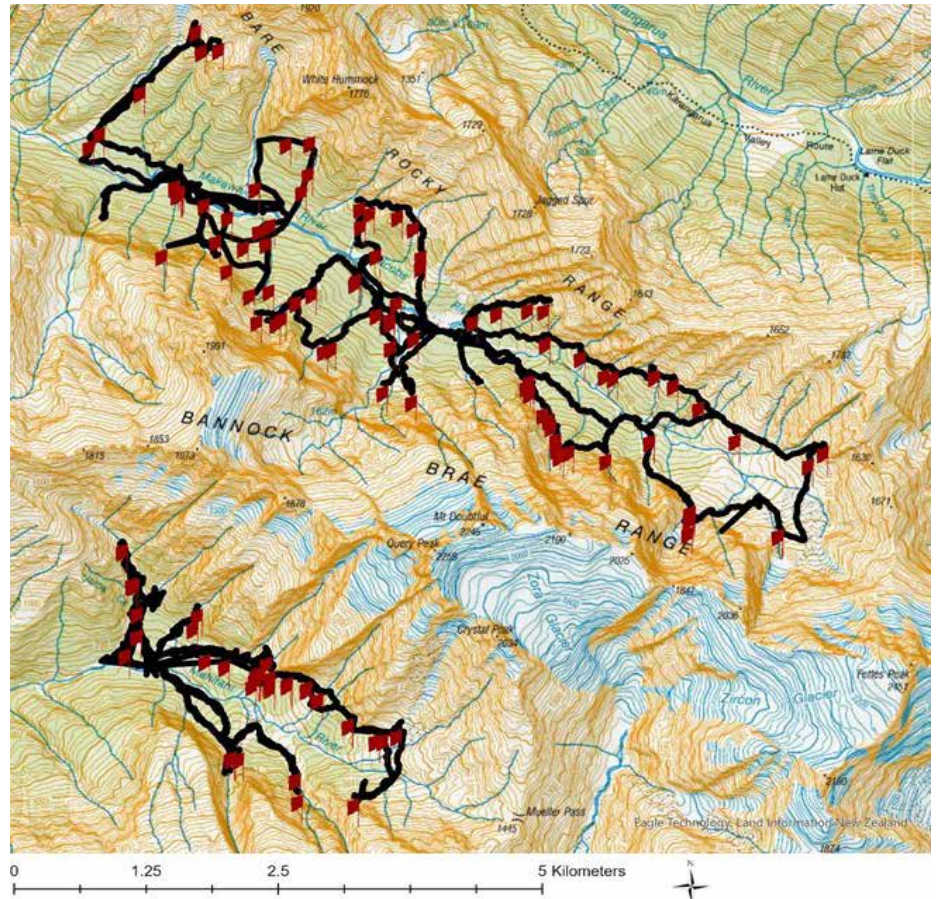
Vegetation monitoring in both alpine and forest habitats is the responsibility of DOC. However, the NZTF hunters on site for management operations take notes and photographs of vegetation status. Further collaboration between NZTF and DOC

for improved environmental monitoring is anticipated.

HEALTH & SAFETY

All volunteers were given a health and safety briefing before departure as per the Community Agreement DOC approved Health & Safety plan. Once on site the team had discussion to identify and discuss any on site issues identified. In addition, hunters were to abide by the following:

- Each hunter was required to carry a first aid kit and each party hold a more comprehensive first aid kit at the tent base camp.
- Each morning the teams were to confirm where they are going to hunt and expected routes of travel and return.
- Each hunter was required to carry either a Personal Locator Beacon or an In-Reach device.
- Each party was to have at least 1 in-Reach device so they can communicate with the NZTF Operational Lead as required, or pilot directly if necessary.
- Each hunter was required to wear at least one hi-vis piece of clothing when hunting and away from camp.
- Immediately after returning from each trip volunteers were required to report to the NZTF Operational Lead, confirm their safe return and report any incidents.
- The Operational Lead was then to advise DOC that everyone has safely returned or of any incidents.



Valley coverage.

OPERATIONAL OUTCOMES

The Makawhio upper and lower operation was undertaken 4th - 7th March by two experienced hunters per site. The Mahitahi operation was conducted 25th-28th February by three experienced hunters.

The opportunity arose to utilise WARO in the Troyte during the planned targeted harvest operational period. Consequently, the Troyte targeted harvest operation was not undertaken in 2023, to be reassessed for 2024.

The NZTF supports coordinated and collective hunting efforts for sustainable tahr population management and the usage of

harvested tahr meat as far as is possible. Accordingly, WARO is a more favorable operational tool than culling when it can be applied.

DATA ANALYSIS

Track logs and waypoints where tahr were shot were loaded onto ArcGIS Pro. Hunter-day was calculated from the total hours hunting for the operation divided by nine (the average hours spent hunting on full days). Average tahr per hour and day were calculated for comparative reporting.

HUNTER REPORTING

The average tahr per hour shot (2.1) was higher on average than that of 2022 (1.6). The average taken per



Photographic confirmation examples.

hour was higher in the Makawhio than 2022, indicating improved efficacy. There were more hunter days undertaken 21.2 versus 16.5 in 2022. Combined, this resulted in a higher overall number of tahr removed 412, versus 182 in 2022.

Hunters reported significant populations of tahr in the Mahitahi and expressed urgent need to reduce the population in this area quickly.

They suggested that the targeting of females and juveniles would be appropriate in this catchment until a reduction was achieved and then moving to an identifiable female policy after this time. Of note, hunters reported a reasonably high proportion of adult nannies shot in and around bush & scrub areas

to be in the 7 - 13 year age bracket, which would indicate these animals have been avoiding other control methods / efforts.

It will be interesting in following years to see if this age class reduces significantly and older animals become less frequently shot.

Approximately 40-60% of tahr observed were shot. The remaining tahr not shot included identifiable bulls. Weather in Makawhio was reported to foggy and drizzly at times but overall was OK. In the Mahitahi the weather was clear.

VALLEY COVERAGE

The Makawhio Lower covered a larger area than during the 2022 operation (See above).

"The NZTF would like to acknowledge the Department of Conservation for its approval to undertake this trial, specifically Tom Brookman and Wayne Costello for their effort to develop the community agreement, also for providing the non-toxic ammunition."

PHOTOGRAPHIC CONFIRMATION

Kills were confirmed by visual observation of death or confident shot placement. As was reported in 2022, photographing tahr shot was challenging and in many cases doing so was reported to reduce the total number that could be shot.

Hunters opted to take photographs only when it was safe to do so and when the effort taking a photograph would not result in disturbance or time wastage that would reduce efficiencies, e.g., shooting opportunities.

Small juveniles were shot to prevent young ones being left to starve; larger juveniles were left.

There was difficulty discerning females from young bulls when groups were running, so there were a few juvenile bulls accidentally shot. These are depicted in the collage above left.



Vegetation examples.

COSTS

The total cost of the operation was NZ\$3425. This does not include the cost of ammunition, provided by DOC at no charge. This is equivalent to \$8.30 per tahr and 13.7 helicopter hours of culling. On average helicopter culling removes 30 tahr per hour (per comms DOC, 2022), though in this bush laden landscape helicopter culling is less successful.

Volunteer hours setting up the operation were 20 hours, including communication, procedure development, health and safety development, and hunter inductions. Volunteer hunter commitment during the operations totalled 21.5 days across all three operations.

KEA OBSERVATIONS

Makawhio Upper kea were observed, total number individuals unknown. Makawhio Lower six individual kea were observed, also one falcon and one whio. Mahitahi heard kea up high but did not observe any in the lower areas.

VEGETATION

Significant tahr impacts were observed by hunters in the Mahitahi where ground-based tahr population management has not been undertaken and aerial control has had limited application. Tahr impacts on vegetation in the Makaawhio were reported to have not observably increased since the 2022 targeted harvest operation. Similarly, improvement

to vegetation was also not observed over the one-year period between operations.

RECOMMENDATIONS

- Repeat the operations in 2024.
- Spend one day longer: 4-5 days per operation may be more effective.
- Consider if targeting only identifiable females is appropriate when the population is high.
- Documentation
- Community agreement (Doc - 6920217).
- Health and Safety agreement (Doc - HS0001).
- Standard operating procedure (Doc - SOP00001).

ACKNOWLEDGEMENTS

The NZTF would like to acknowledge the Department of Conservation for its approval to undertake this trial, specifically Tom Brookman and Wayne Costello for their effort to develop the community agreement, also for providing the non-toxic ammunition.

Thank you to the hunters who gave up their time to participate in this trial and provided their experience and skill at targeting identifiable females. Finally a big thanks to those who donated to the givealittle page monies received by the Tahr Trust, and the Tahr Trust for approving the use of these funds for this trial.

Kaylyn Pinney