AWQAF NEW ZEALAND · A WAQF OF KNOWLEDGE · THE MEASURING ZERO QURBANI WASTE PROGRAMME

Qurbani Utilisation Index

Awqaf New Zealand — QUI-Awqaf NZ · a methodology note for the Qurbani supply chain, adapted from the published food-loss methodology of the Food and Agriculture Organization of the United Nations, which underlies SDG indicator 12.3.1(a)

Version 2 — issued 13 September 2026. Offered to universities and government research centres. Version 1 (8 September 2026) remains available.

This note proposes a method. It contains no findings, and Awqaf New Zealand has generated no primary data: there is no farm in operation and no capital has been deployed. The Food and Agriculture Organization of the United Nations is cited here as the source of a published methodology. It has no involvement in this work, has not reviewed it, and nothing here should be read as its endorsement.

Contents

1. The problem this note addresses
2. Why measure Qurbani as waste
3. Why an established method, rather than a new one
4. The method being adapted
5. The Qurbani supply chain, staged
6. The proposed index
7. What can be measured now, and what cannot
8. The register of published claims
9. The reference chain
10. Why this is offered rather than published
11. The strongest objections to this note
12. Sources

1. The problem this note addresses

Awqaf New Zealand's founding purpose is stated as turning wasted charitable resources into sustainable waqf revenues, and it identified the annual Qurbani as the single largest source of that waste. Every part of its programme follows from that finding.

The finding itself, however, has never been measured.

> **There is no global Qurbani census, and nowhere any count of what becomes of the animal.**
>
> A small number of national and institutional counts do exist. Bangladesh's Department of Livestock Services recorded **9.1 million animals** sacrificed at Eid-ul-Azha in 2024. Saudi Arabia's Adahi project publishes an annual capacity of **1.5 million sheep**, and **1.2 million head** contracted in a single Hajj season. Türkiye Diyanet Vakfı reported **747,052 proxy shares** in 2024. They count different things, by different methods, over different populations, and cannot be added together. **Every one of them counts how many animals. None of them counts what happened to the animal**, which is the subject of this note.
>
> One study goes further than a headcount — Ammar H Khan, "The Economics of Pakistan's Eidul Azha", *Dawn* (EOS), 24 May 2026 — putting Pakistan's 2025 Eid al-Adha turnover at Rs641 billion (≈ US$2.3 billion) across an estimated 7.4 million animals, with edible meat valued at Rs1,203 per kg. It is triangulated three ways: tanners' association hide counts, municipal offal tonnage across seven cities, and central-bank cash-in-circulation data. **Beyond that one country and one year, the scale of the waste is not evidenced.**

Awqaf New Zealand has itself published figures it later withdrew for want of a source, and records those withdrawals openly. That experience is the origin of this note: **a purpose that cannot be measured cannot be evaluated, cannot be researched, and cannot properly be funded.**

2. Why measure Qurbani as waste

Qurbani can be measured several ways. It is usually measured by what is given away — animals slaughtered, beneficiaries reached, countries served.

Those are the figures the field publishes, and they answer a real question. This note measures something else: what happens to the animal. **The choice of lens is not neutral, so it is argued here rather than assumed.**

One. It is the only lens under which Qurbani is a system rather than a transaction. Counted by beneficiaries, Qurbani is an act of distribution that begins and ends within four days. Counted by utilisation, it is a supply chain carrying recoverable value — and a supply chain can be improved, financed and endowed. The lens decides whether there is anything to build.

Two. Nobody's interests oppose it. Every other lens implies comparison between organisations: who reaches more people, who costs less, who delivers faster. Waste implies a shared upside. Raising utilisation takes no meat from any beneficiary, no donor from any charity, and no authority from any scholar. It is the one measure in this field where every organisation can improve without another doing worse.

Three. The wasted portion is the only new money that needs no new donor. Charitable income is bounded by generosity. Recovered value is bounded only by what is currently discarded. And under a waqf, recovered value can be endowed rather than spent — which converts a single day's act into a permanent revenue. That is the whole economic premise of the model this note serves, and it stands or falls on whether the discarded portion is real and large.

Four. It is the part that can actually be weighed. The spiritual value of the rite is not a measurable quantity and this note makes no attempt on it. Beneficiary welfare requires longitudinal study that nobody in this field is funding. Physical utilisation of an animal is weighable, with a scale and a set of records. If Qurbani is to enter the frameworks where research funding, policy attention and international reporting live, **waste is the only door with an existing indicator already behind it.**

Five. The fifth quarter is both where the value is and where the silence is. Meat is counted because it is the visible part. Hide, offal, bone, blood, fat and wool are the majority of the animal's recoverable non-meat value, and they are almost never mentioned in any published account. Measuring waste is how the unmentioned part of the animal becomes visible.

Six. The largest operator in the field has already said so. Among the stated aims of the body supervising the largest concentrated Qurbani operation anywhere in the world is "*provide sustainable solutions for the disposal of animal waste*" (§9). The premise of this note is therefore not a criticism of the field. **It is a question the field's largest operator has itself put on its own list.**

> **What is being measured here, and what is not.**
>
> The rite is not what is measured. Qurbani is an act of worship, and its validity, its timing and its ritual requirements are matters of jurisprudence on which this note takes no position and offers no view.
>
> What is measured is what happens to the animal's body and value **after the ritual obligation has been discharged**. Anyone who reads this note as reducing worship to logistics has read it as its author did not intend, and the distinction is stated here so that it cannot be mistaken.

3. Why an established method, rather than a new one

Awqaf New Zealand has already settled which measure matters. Its standing position is to measure the mission rather than the financial return, and it names two measures: the cost per Qurbani animal delivered, against the Eid market price; and the utilisation rate — the share of each animal's total value captured for social development.

What has been missing is a defensible way to compute the second. Borrowing a method that is already published, already criticised and already used for international reporting has three advantages over designing one: the results are comparable with other food systems, the method can be attacked on its own terms rather than dismissed as self-serving, and a figure produced by it is citable.

4. The method being adapted

Sustainable Development Goal target 12.3 commits to halving food loss and waste. It is measured by two complementary indicators: the **Food Loss Index**, covering losses from production up to but not including retail, for which the **Food and Agriculture Organization of the United Nations (FAO)** is the custodian agency; and the **Food Waste Index**, covering retail and consumption, for which the **United Nations Environment Programme (UNEP)** is custodian.

The Food Loss Index method has four steps: define the commodity; define the stages of its supply chain; measure or estimate the proportion lost at each stage; and weight the stages by volume or value to give a single index. **It is the second and third steps that transfer to Qurbani**, because the supply chain is short, seasonal and unusually well bounded in time.

> **The adaptation, stated plainly.** The FAO method was built for crops and staple commodities in continuous supply chains. Qurbani is ritual slaughter concentrated into roughly four days. The stage structure transfers; **the loss ratios, benchmarks and seasonality assumptions do not**, and would have to be established rather than imported.

5. The Qurbani supply chain, staged

Five stages of physical loss are proposed. A sixth item is often counted with them and is set apart below, because it is not a loss in the sense the method intends and must not be added to the other five.

Stage	What is lost	How it could be measured	Data availability
S1 Pre-Eid holding	Liveweight, mortality and feed cost while agents and farmers hold stock for a date-certain market	Liveweight at purchase against liveweight at slaughter; mortality records; length of holding period	Poor. Requires primary survey
S2 Slaughter	Losses in uninspected or unequipped slaughter; incomplete bleeding and dressing	Dressing percentage against an established benchmark for the breed and age	Benchmarks exist; Qurbani-specific data absent
S3 Carcass recovery	Edible meat not recovered, or spoiled before distribution begins	Recovered edible weight as a proportion of expected carcass yield	Moderate where processing is formal; absent where it is not
S4 The fifth quarter	Hide, offal, bone, blood, fat and wool discarded rather than recovered	Tonnage recovered against tonnage generated. Two proven proxies exist: tanners' hide counts and municipal offal tonnage	**Best of the six.** Both proxies were used in the *Dawn* study
S5 Distribution	Spoilage between slaughter and the beneficiary, where there is no cold chain	Elapsed time to consumption; reported spoilage at the point of receipt	Poor. Requires primary survey

Set apart: foregone productive life

Item	What is forgone	How it could be estimated	Status
S6 Foregone productive life	Milk, wool and lambs not obtained, because the animal is raised for a single day	Counterfactual against a dual-purpose flock of the same breed and size	Modelled, not measured. **Reported separately and never summed with S1–S5**

This item is not part of the FAO method and must not be presented as though it were. It is an opportunity cost, not a physical loss: nothing is destroyed, something is never created. It is included because it is where the largest value sits and because it is the entire basis of the year-round production argument — but it is a model whose assumptions a reader is entitled to reject without rejecting stages one to five.

6. The proposed index

This index is named the Qurbani Utilisation Index, Awqaf New Zealand — abbreviated QUI-Awqaf NZ. It is named so that it can be cited, compared across seasons and countries, and applied by others without reference to Awqaf New Zealand. Anyone may compute and publish a QUI-Awqaf NZ figure, provided the method set out in this note is followed and the result is reported stage by stage as well as in total.

Qurbani Utilisation Rate — the value captured for social development, as a proportion of the total realisable value of the animal, reported both as a single figure and stage by stage so that a reader can see *where* the loss sits rather than only how large it is.

Reported alongside the two companion measures already adopted: cost per Qurbani animal delivered, against the prevailing Eid market price; and the proportion of animals delivered within the ritual window.

A single headline number invites exactly the criticism that destroyed earlier figures. **Reporting per stage does not**, because each stage carries its own data quality, stated openly.

7. What can be measured now, and what cannot

Of the six stages, one is measurable today with existing proxies, three require primary survey work, one requires access to formal processing data, and one is a model. **Any partner should know that before agreeing to anything.**

Status	Stages	What would be needed
Measurable now	S4	Tanners' association and municipal waste data, in at least three countries, over at least two seasons
Primary survey	S1 · S5	Field survey of agents, holders and recipients across a single Eid
Conditional	S3	Cooperation of formal processors; comparison against informal slaughter
Benchmark first	S2	Dressing-percentage benchmarks for the breeds actually used
Model only	S6	A dual-purpose comparator flock, which does not yet exist

8. The register of published claims

Only one of the six stages is measurable today from existing sources. There is, however, a second thing measurable today from a desk, and it answers a different question: not how much is wasted, but **what the field currently knows about it.**

Every year, hundreds of organisations publish Qurbani figures — animals slaughtered, beneficiaries reached, countries served. Nobody has assembled them. A register recording those published claims, exactly as published, would establish something this note so far only asserts: **that the field counts what it gives away and does not count what it discards.**

> **Developing, not undermining. Complementing, not competing.**
>
> This register exists to give every organisation in the field a number it currently cannot compute. It does not exist to rank them, to expose them, or to compete with them. Awqaf New Zealand is among the smallest bodies in this sector and has less to publish about its own operations than almost any organisation the register will record — because it has no operations at all.
>
> Where the register records what others have published, it records it to establish what is known and what is missing. **Not to find fault.**

It is a register of claims, not of data, and that distinction is the whole discipline of the instrument. A published figure is a statement an organisation has made. It is not a measurement that Awqaf New Zealand, or anyone else, has verified. Presenting claims as data would be precisely the error this note exists to warn against.

What each entry records

Field	What it records	Why
Organisation	Name and country of registration	Identifies the claim's author and its legal home
Source, year, date of access	The published page or report, and the date it was read	Published pages change. A claim without a date of access is not citable
Language of the source	The language the claim was published in	Organisations often publish in several languages, and entries can differ between them. Each language is therefore recorded separately, as a matter of method
Animals claimed	Number, species, country of slaughter	The denominator
Beneficiaries claimed **and the stated unit**	Individuals? Families? Meals? Kilograms?	**The unit is usually unstated. That absence is itself the finding**
Meat weight stated	Yes / No	Whether the claim can be converted into anything physical
Fifth quarter mentioned at all	Yes / No — hide, offal, bone, blood, fat, wool	The majority of recoverable non-meat value
Utilisation or waste figure published	Yes / No	Whether any organisation anywhere publishes this
Cost per animal published	Yes / No	The companion measure already adopted
Derived: implied meat per beneficiary	Computed by the register, not claimed	Testable against known dressing percentages
Flag: internally consistent	Whether the claim is arithmetically possible	**Recorded. Never published against a named organisation**

What the register can establish, and what it cannot

It can establish	It cannot establish
Whether the field publishes anything at all about the animal's recoverable value	How much is actually wasted, anywhere
Whether beneficiary counts carry a defined unit	Whether any published claim is true
Whether the fifth quarter is ever mentioned	What any organisation actually does with the fifth quarter
Whether a utilisation figure exists anywhere in the field	What the utilisation rate is

> **The register measures what the field says, not what the field does. The gap between the two is exactly what a register cannot close — and naming that gap precisely is most of its value.**

Three rules, fixed before any entry is made

One. Claims are recorded as published, in the language published, with the date of access. They are not corrected, adjusted or harmonised, and divergences between an organisation's own sources are recorded rather than resolved.

Two. Patterns and aggregates are published; the named register is held. It is made available to any researcher on request. Adverse arithmetic is never published against a named organisation. Awqaf New Zealand's transparency rule requires it to disclose its own errors; it does not license publishing findings against third parties who have not been consulted.

Three. Claimed beneficiary numbers are never totalled. They are routinely double-counted between partner organisations, and the unit is usually undefined. A global total of claimed beneficiaries would be exactly the kind of unsourced figure Awqaf New Zealand has already had to withdraw once.

A first worked entry

The register's first entry is the largest operator in the field, recorded to demonstrate the method rather than to make any point about the operator. Every value below is a claim published by the operator itself, quoted as published.

Field	Recorded value
Organisation	The Kingdom of Saudi Arabia Project for Utilization of Hady & Adahi ("Adahi"), Saudi Arabia
Oversight, as published	Supervised by the Royal Commission for Makkah City and Holy Sites, in accordance with Cabinet Resolution No. (360). Founding given as 1403 AH (1983) on the Arabic page
Source and access	adahi.org — "About Adahi", English and Arabic pages, accessed 8 September 2026
Animals claimed	Contracted livestock: 1,200,000 head (English page); "more than 1,200,000 head" (Arabic page)
Capacity claimed	1.5 million sheep; 10,000 camels and cows
Facilities claimed	Seven integrated processing complexes in Makkah
Distribution claimed	More than 27 countries throughout the Muslim world
Beneficiaries claimed	**Not stated as a number** on the pages accessed
Meat weight stated	No
Fifth quarter mentioned	**Yes** — "provide sustainable solutions for the disposal of animal waste", listed among the supervising Commission's aims (English page)
Utilisation or waste figure published	No
Cost per animal published	Not on the pages accessed

DISCLOSURE

Every value in the entry above is a claim published by Adahi, recorded as published and not verified by Awqaf New Zealand. Awqaf New Zealand has not measured, audited or independently confirmed any of it.

Adahi has not been approached, has not reviewed this note, and has no involvement in this work. It is recorded first because it is the largest operator whose figures are published, and for no other reason.

Both the English and Arabic pages were consulted and each is cited. Where an entry quotes one language, that language is named — not to draw any inference, but because the register cites what it read.

9. The reference chain

The six stages are not equally observable everywhere, and this is the practical obstacle to the method rather than any dispute about its logic. The most concentrated occurrence of Qurbani anywhere in the world is the **Hady and Adahi of the Hajj**: one location, a few days, and — unlike Qurbani almost everywhere else — formal industrial processing under an established national operation. That matters methodologically, and this note advances it on no other ground.

The operation's own published figures are recorded as claims at §8. Two of them bear directly on the method: **seven integrated processing complexes**, and **more than 1,200,000 head contracted**. A chain of that scale, formally processed in one place, is where several stages stop being survey questions.

Stage	Observable in a formal chain	Why
S2 Slaughter	Yes	Inspected slaughter under recorded conditions, against which dressing-percentage benchmarks can be set for the breeds actually used
S3 Carcass recovery	Yes	Recovered edible weight is already weighed as part of normal operation
S4 The fifth quarter	Yes	Hide, offal and bone are already handled at industrial scale, so recovery against generation becomes a records question rather than a survey
S1 Pre-Eid holding	Partly	Holding sits upstream of the formal operation and remains survey-dependent
S5 Distribution	Partly	Distribution runs onward to many countries; spoilage after handover is not recorded
S6 Foregone productive life	No	Remains a model wherever it is applied

A formal chain gives a ceiling, not an average. A utilisation rate measured in the most organised Qurbani operation in the world is the best case, not the typical case. Informal slaughter elsewhere will sit below it. This strengthens the method rather than weakening it, on one condition: **the figure must always be reported as an upper bound and never as a global average.** Reported that way, it gives every other chain a benchmark to be measured against — which is precisely what does not exist today.

And the operator has already named the question.

Among the aims published by the supervising Royal Commission is "*provide sustainable solutions for the disposal of animal waste.*" An instrument that measures how much of the animal is recovered is therefore useful to that aim rather than a criticism of it.

This is the whole posture of this note: the field's largest operator has put animal waste on its own list of things to solve. Awqaf New Zealand is proposing a way to measure it.

DISCLOSURE

Awqaf New Zealand states no figure of its own for the number of animals in this operation. The figures at §8 are the operator's published claims, quoted as published and not verified.

Nothing in this section implies that the operating body has been approached, has reviewed this note, or is involved in this work in any way. The operation is named here as the methodologically obvious reference chain, and for no other reason.

10. Why this is offered rather than published

Awqaf New Zealand cannot generate this data. It has no farm, no flock and no capital, and it is run by six volunteers. What it has is fifteen years on the jurisprudence, a codification, a published feasibility study with its full version history, and the problem stated precisely.

So this note is offered to a university or a government research centre that can do the work, on terms already set out in Awqaf New Zealand's collaboration terms:

- The partner keeps ownership of everything it produces.
- The partner publishes independently, in its own name, without approval from Awqaf New Zealand — **including findings that go against this model.**
- Awqaf New Zealand does not approve, control, direct or review the partner's research, and nothing creates a supervisory or funding relationship.

Independence is the point. A utilisation figure produced by the organisation that needs it to be high is worth very little; the same figure produced independently is worth a great deal.

The register at §8 is the natural first piece of work. It is desk research on published sources: no fieldwork, no ethics approval, no capital, and a defined, publishable output. It is the part of this programme a postgraduate student could begin next term.

11. The strongest objections to this note

Stated at full strength, because a method that has not survived criticism should not be used.

The method does not fit the commodity

FAO's framework was built for continuous agricultural supply chains. A four-day ritual slaughter with no formal market structure in much of the world may violate its assumptions badly enough that the stage weights become arbitrary.

"Waste" is a contested word here

Part of what an economist counts as loss is religiously prescribed distribution — meat given away immediately, consumed quickly, and not recorded anywhere. **Counting uncounted distribution as waste would be both wrong and offensive**, and the method must be able to distinguish them.

The waste lens may itself be the wrong lens

Section 2 argues for it. A reader may answer that measuring an act of worship by its material yield imports an economic frame the rite does not invite, and that the frame will shape what is valued whatever the disclaimers say. **That objection cannot be settled by a methodology note.** It is a question for scholars, and this note would rather have it raised than assume it away.

The register measures words, not deeds

A register of published claims establishes what organisations say. It cannot establish what they do, and an organisation that publishes nothing about the fifth quarter may still recover all of it. The register's findings are about the state of the published record, and must never be reported as findings about practice.

Stage six assumes an alternative that may not exist

The foregone-production argument requires that a dual-purpose flock is actually available in the relevant place, at the relevant scale, at acceptable cost. Where it is not, the opportunity cost is theoretical.

A utilisation rate can be gamed

Whoever defines "value captured for social development" controls the numerator. The definition must be fixed and published before any measurement, not chosen afterwards.

A ceiling can be misread as an average

Section 9 proposes measuring the most formal chain available. If that figure is later quoted without its qualification, it will overstate global utilisation — and the misreading will be Awqaf New Zealand's fault for having produced it, not the reader's.

Naming the largest operator invites a reading this note does not intend

Recording an operator's published figures, and naming its chain as the methodologically obvious reference, could be read as an assessment of that operator. It is not one. No approach has been made and no assessment is offered — but the risk of the misreading is real, and it is why §8 and §9 each carry a disclosure.

And the obvious one: Awqaf New Zealand has an interest in the answer

It does. That is why the measurement is offered to others, why the method is published before any data exists, and why this section is here.

12. Sources

Food and Agriculture Organization of the United Nations — methodology underlying SDG indicator 12.3.1(a), the Food Loss Index. *Cited as a published methodological source; FAO has no involvement in this work.*

Ammar H Khan, "The Economics of Pakistan's Eidul Azha", *Dawn* (EOS), 24 May 2026.

The Kingdom of Saudi Arabia Project for Utilization of Hady & Adahi — "About Adahi", adahi.org, English and Arabic pages, accessed 8 September 2026. *Cited as the publisher of the claims recorded at §8; Adahi has no involvement in this work.*

Department of Livestock Services, Bangladesh — national count of animals sacrificed at Eid-ul-Azha 2024, as reported in *The Daily Star*, 11 June 2025. *Cited as the publisher of a national claim; it has no involvement in this work.*

Türkiye Diyanet Vakfı — proxy sacrifice shares processed, 2024. *Cited as the publisher of an institutional claim; it has no involvement in this work.*

International Islamic Fiqh Academy, Resolution 140 (15/6), Muscat 2004, clause 3 — endowed cash invested in assets does not make those assets waqf; the waqf remains the cash principal.

Awqaf New Zealand — Feasibility Study, Qurbani Sheep-Dairy Pilot (Auckland), with its published version history.

> *Each figure quoted in any future version of this note is to carry its source inline. Where no source exists, no figure is to be given.*

How to cite this note

Benyounis, H. (2026). *Qurbani Utilisation Index (QUI-Awqaf NZ): measuring zero Qurbani waste — a methodology note for the Qurbani supply chain* (Version 2.0). Awqaf New Zealand. https://doi.org/10.5281/zenodo.22700036

> **This note has a permanent Digital Object Identifier and is archived at CERN.** Please cite the DOI in preference to this web address, which may change.
> **This version (2.0):** 10.5281/zenodo.22729997
> **Version 1.0:** 10.5281/zenodo.22700037
> **All versions** — always resolves to the latest: 10.5281/zenodo.22700036

Version history

Version 2 — 13 September 2026. Corrects the statement in §1 that there is no national Qurbani census. National and institutional counts do exist in a small number of places; they are not comparable with one another, and none of them measures utilisation. Found by Awqaf New Zealand against itself, and recorded as entry **006** in the public feedback log rather than corrected silently. Version 1 remains available at its own address.

Version 1 — 8 September 2026. First issue. Proposes a method; contains no findings and no primary data.

Superseded versions of Awqaf New Zealand research are kept online so that what changed, and why, can be seen. When a version 2 is issued, version 1 will remain at its own address.

Criticism is welcome

This note is published in order to be examined. Objections, corrections and alternative methods are recorded in the public feedback log — including those Awqaf New Zealand does not act on, and its reasons for not acting. Write to smartwaqf@awqafnz.org.

Status. Version 1, issued 8 September 2026. This note proposes a method and contains no findings. Awqaf New Zealand has generated no primary data. Published as a *waqf of knowledge* under CC BY-NC 4.0 and may be cited and replicated freely with attribution.

Not an offer. Nothing in this document constitutes an offer, invitation or recommendation to acquire any financial product. No Temporary Cash Waqf units are offered or available. Awqaf New Zealand does not solicit donations, runs no public fundraising, and works only through official channels.

Conditional. No farm is operating and no capital has been deployed. The dual-contract structure underpinning the Temporary Cash Waqf remains in draft pending the ruling of a specialised international jurisprudential forum on waqf.

Third parties. The Food and Agriculture Organization of the United Nations is cited as the source of a published methodology. Adahi is cited as the publisher of the claims recorded at §8. Neither has any involvement in this work, neither has reviewed it, and nothing here should be read as the endorsement of either.

Prepared by Awqaf New Zealand with Claude Pro (Cowork) — Anthropic. Responsibility for the contents rests with Awqaf New Zealand alone.