5DSAF Pilot Feedback Report

Wildlife TRAPS Project support to **Darwin Innovation Grant** DARNV009

Developing and testing a sustainability assessment framework for wildlife use

Case study: Tanzania

March 2024

1. BACKGROUND

Opportunities for piloting the 5DSAF in Tanzania

Legalized game meat trade:

In 2020, the government of Tanzania established regulations that allowed the selling of wild meat (also legally referred to as Game meat) through licensed outlets known as Game Meat Selling Facilities (GMSFs) as provided in the Wildlife Conservation (Game Meat Selling) Regulations, announced in Government Gazette no. 84 on 07 February 2020. These regulations frame the governance of legal hunting, trading and sale of game meat, allowing any Tanzanian business that meets all the specified requirements to open a GMSF and sell game meat to the public.

Structure of the game meat selling industry:

The current framework in place for regulating game meat selling activities is complex and the industry has developed rapidly since 2020. There are various classifications for sourcing of a wide list of wild animals (mammals) for hunting and onward sale via registered Game Meat Selling Facilities within Tanzania. These include resident and tourist hunting, wildlife farming and ranching, and problem animal control. These variations in sourcing create supply chains with different characteristics and multiple stages that require multi-sectoral oversight, including monitoring wildlife harvests and sales, undertaking research into wildlife populations and trade dynamics, control of food safety and meat quality, and disease surveillance. In summary, the relatively game meat industry provided a suitable context for piloting the 5DSAF.

Initial assessments of the game meat industry carried out by TRAFFIC

Over the past three years, TRAFFIC has undertaken several assessments that evaluated the performance of the game meat selling scheme, gathering evidence from a sustainable, legal and safety lens. It involved understanding the regulatory framework and responsibilities of all actors in the supply chain, from the sourcing node to the end-use node, mapping critical control points, and analyzing the risks for disease transmission along the supply chain. This pool of information has in effect become a prerequisite for effectively evaluating the applicability of the 5DSAF with respect to the Tanzania game meat trade.

This short report summarizes the feedback obtained from piloting the 5DSAF in Tanzania via consultation with a range of government officials and private sector actors involved at various stages and jurisdictional responsibilities along the game meat industry's supply chains. It highlights the methodology used to collect evidence, lessons learned and recommendations for the effective utilization of the 5DSAF framework.

2. APPROACHES

Approach 1: Internal evaluation of the framework

A group of selected members of the TRAFFIC East Africa team did the first review of 5DSAF. This group was composed of staff with backgrounds in environmental law, law enforcement, forest management, bushmeat trade and social and behavioural change experience. At the time of assessment, the level of familiarity with the game meat industry was different among the staff members; therefore, a short presentation was made to the group on how the Game Meat Industry relates to the 5DSAF and what the evaluation seeks to achieve. Staff then reviewed the framework, scored the principles individually, and provided overall feedback on the process.

Approach 2: External evaluation of the framework

Through a meeting organized by TRAFFIC, which brought together representatives of the Game Meat Selling Advisory Committee (GMSAC), representatives of the Tanzania wildlife farmers and game meat selling association (TAWIFAGAMSA), the Tanzania Wildlife Management Authority (TAWA), local hunters and game meat selling facility (a meat selling point) operators. No specific expertise, either institutional or individual, was available from social or welfare sectors, which may indicate some bias in the results, but it is worth noting that there is an animal welfare component built into wildlife management, and similarly there are social aspects to all agency responsibilities represented in the GMSAC.

Altogether, this group consisted of representatives from the veterinary, public health, food quality and control, wildlife management and research department sectors and the business community. While not all inclusive, it was a suitably diverse group of expert stakeholders to evaluate the utility of the 5DSAF with respect to the Tanzania game meat industry.

The GMSAC team spent approximately 2 hours discussing this topic and undertaking a quick test. To set the scene, TRAFFIC provided a short presentation about the framework for about 20 minutes. Participants then ranked the five dimensions that are relevant to the game meat-selling industry.

After that, participants formed three groups based on their roles or expertise, with reference to what were determined to be the three most relevant dimensions (Health, Economic and Ecology), as shown. For example, participants representing the wildlife sector were tasked with reviewing all the principles of the ecological dimension (plus welfare and social dimensions). The same approach was used for the health and economic dimensions – thus, the three groups reviewed all five dimensions but from the perspective of their agency jurisdictions and/or expertise. This was followed by a plenary session, where each group presented a feedback summary. The following questions guided the session.

1. *Is the framework a suitable tool to evaluate the sustainability of the game meat trade?*
2. *What other forms of wildlife utilization in the country can be evaluated using this framework*
3. *How relevant are the principles for each dimension?*

For 30 minutes, participants then went through the Excel score sheet and insert scores to avoid bias. Due to differences in levels of understanding of the game meat value chain among the participants, the approach described above was used. Each participant was required to fill in the scores for the dimension in which he/she is experienced or if his/her roles within the game meat value chain are relevant. This was followed by a plenary session guided by the following questions.

1. *How easy is it to make a score?*
2. *How easy was it to navigate through the score sheet?*
3. *Are the evaluation criteria relevant to each principle?*
4. *Do you feel you're the right audience to make a score? If not, who is?*

3. FEEDBACK

From the internal evaluation:

1. Almost all participants agreed that the framework could be a valuable tool in evaluating the performance of the game meat-selling industry.
2. The welfare/social dimension principles do not suit the Tanzania case well. Participants highlighted that because no established farms and ranches have started supplying game meat/animals, it is difficult to assess the welfare principles as they are more related to wildlife farming and ranching. On the other hand, for the social dimension, the concern was that traditionally, wildlife legislation recognizes social rights over wildlife for only a few tribes; therefore, at a national level, it is challenging to make conclusions based on the principles on a countrywide basis.
3. Using a few of the Five Dimensions can sketch out a rough evaluation based on the situation of a particular country or industry. As highlighted above, participants argued that using less than the full five dimensions is enough to evaluate whether a specific industry is sustainable or not. The evaluation does not need to consider all five dimensions, especially if one is evaluating individual supply chains or specific wild meat utilization activities such as tourist hunting. Thus, determining whether a certain wildlife utilization dynamic meets sustainability criteria was thought to be possible by using the collective available expertise, based on the scoring tool rating indicators from 0-3, even if all 5 dimensions of information were unavailable at the same level of expertise or relevance.

4. It is difficult to fully utilize this framework if an assessment with similar indicators had not been conducted previously. Participants highlighted that a pre-assessment approach should consider the current indicators (in the Excel scoresheet) when collecting data to fully utilize the Excel scoresheet. While available expert opinions remain valuable, to apply the 5DSAF at an appropriate scale for the wildlife trade dynamic being evaluated would ideally involve undertaking an extensive assessment as part of the scoring exercise.
5. The result chart is complicated to interpret for someone who is not familiar with it, and perhaps there is a better way of illustrating the outcome of the assessment.
6. Navigating through the Excel-based scoring tool is swift if you have enough information.
7. There are no considerations for reverse-zoonoses, considering the context in which humans and livestock may transmit pathogens back to wild animals at various interfaces. The focus is strictly on human health, and this could be an additional principle/consideration to add into the framework.

From the external evaluation:

1. Generally, the health, ecological and economic dimensions scored the highest in terms of relevance to the game meat industry, whereas welfare and social scored the lowest (Figure 1). Some of the reasons/perceptions for the low score also included in the text boxes below.
2. The majority of the participants agreed that the framework could be a helpful checklist in assessing the overall sustainability of the Tanzania game meat industry.
3. The end result (assessment outcome) chart presentation is challenging to interpret.
4. Some participants found that calling it a sustainability framework was not logical, based on sustainability being a term applied normally only to the non-detrimental impacts on wildlife. It was suggested that the 5DSAF could be renamed as a “management” framework.
5. Overall, the majority of respondents strongly agreed that the framework could be a valuable tool for evaluating the sustainability of any wildlife utilization (Figure 2).
6. Making a score was easy when participants had prior information about the situation on the ground or their roles and expertise fitted within a specified dimension. Therefore, the tool would likely be more effective when the consultation includes inputs from officials/stakeholders working on the ground (including hunters, transporters, traders, and farmers) who have direct understanding of the current situation, rather than if the tool was used by higher-level policymakers only. Overall, the majority of the participants in this trial acknowledged that navigating through the scoring tool was smooth (Figure 3).

Welfare	**Social**
- No established farms have started supplying meat to the GMSFs. - There are no farms that have been established for the purpose of game meat. - Animal welfare does not apply during hunting.	- All wildlife animals are government property. - All land is owned by the government. - The game meat is designed for urban consumption. - Minimal cultural ties to wild meat consumption among Tanzanians. - Only a few ethnic groups/tribes have special rights to hunt and consume wild meat recognized by the Wildlife Conservation Act, 2009.

Table 1. Scores[1] for each dimension, indicating relevance to Tanzania's game meat industry

	Department	Dimension score (0-5): 0 not relevant - 5 very relevant				
		Welfare	Health	Ecological	Social	Economic
1	Wildlife management (1)	4	5	5	5	5
2	Wildlife commerce (1)	5	3	5	1	5
3	Wildlife veterinary (1)	4	4	5	1	5
4	Veterinary and Inspection (1)	0	5	5	0	3
5	Public health (1)	0	5	5	0	3
6	Meat safety and quality (1)	0	5	5	0	1
7	Food and Drugs Control (2)	2	5	5	2	1
8	Local hunters (2)	5	5	5	0	5
9	Game meat traders (2)	5	5	5	2	5
	Average score	3	5	5	1	4

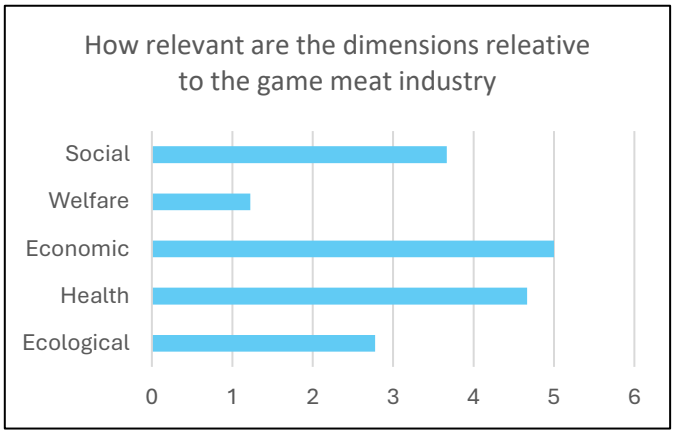

Figure 1. Relevance of the five dimensions with reference to the game meat selling industry in Tanzania

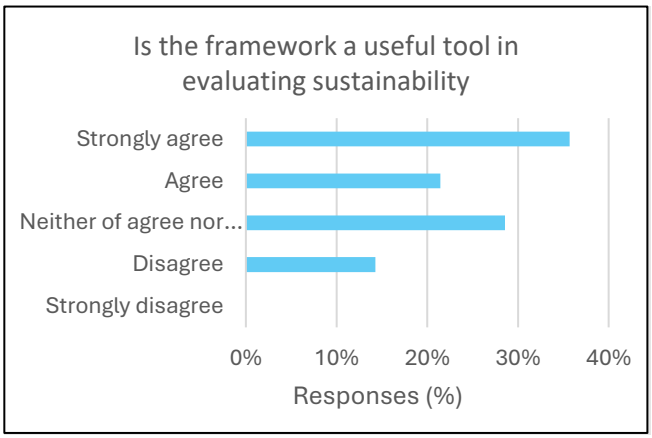

Figure 2. Responses to the question "Is the framework a useful tool in evaluating sustainability?"

[1] The total score in each cell, represented the response from selected experts. For example, if more than one participant had the same expertise, the scores were combined into a single score representing a consolidated score.

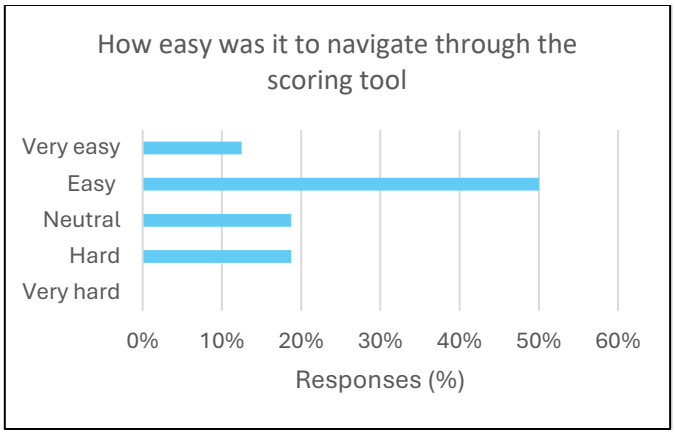

Figure 3. Responses to the question, "How simple was it to navigate through the Excel scoring tool?"

SUMMARY	Proportion of max score	Score	Max possible score
Animal welfare	0.00	0	6
Human health	28.57	6	21
Ecological	75.00	9	12
Social	60.00	9	15
Economic	28.57	6	21
X-cut	**38.10**	**8**	**21**

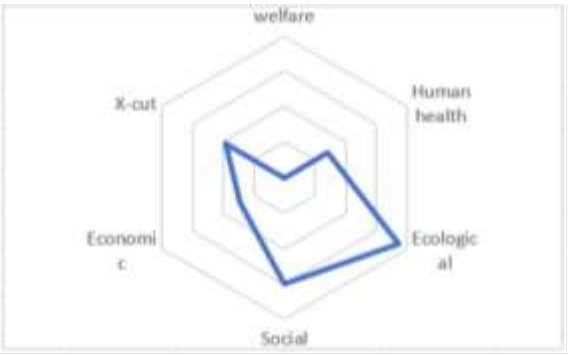

Figure 4. Assessment outcome. Participants of the Game Meat Selling Advisory Committee Meeting on 14 and 15 March 2024.

The outcome figures above reflect the extent of available knowledge within the GMSAC members, but also the difficulties experienced in understanding how to evaluate the welfare principles with reference to the game meat industry.

As mentioned earlier, that was largely because welfare is understood to be linked primarily to the more controlled environments of farming and/or ranching. However, neither of these production systems have been fully developed for supplying the game meat industry in Tanzania (therefore, it was hard to establish the evaluation criteria in that regard). However, it was also not well understood among the participants whether these principles also applied to free-ranging wildlife (apart from wildlife captive facilities) where harvesting could take place. For example, across the geographic and ecological variation within a zoned hunting block, where most of the parameters for upholding animal welfare cannot be controlled in the same manner as a fixed location for farm or ranching.

Despite the inequivalent level of knowledge among participants, generally, the outcomes show that the majority of the ecological principles scored high, indicating that there are some good practices when it comes to ensuring the sustainable use of wildlife animals for the game meat trade.

Surprisingly, the social principles also received a high score despite a weak link ascertained by the participants with regard to the situation in Tanzania, as explained in the feedback session. Therefore, it can be hypothesized that the current game meat industry maintains a favourable environment that considers the majority of the social parameters.

As expected, the human health principles had the lowest scores, which generally shows that food safety and quality requirements in the space of legislation, capacity, compliance and knowledge are not highly maintained within the game meat industry, which argues for immediate mitigation.

Lastly, similar to human health, the Economic dimension also received a very low score. Feedback from the participants showed that the industry is still premature. There is a low supply of game animals and a high demand for game meat. Some of the primary objectives of establishing the game meat industry was to allow Tanzanians to benefit from their wildlife and put in place a mechanism to reduce poaching, however the economic aspects of the trade were not carefully planned. These aspects include incentives to manage trade, supply and demand, and market competition. The lack of consideration for these aspects made it difficult to ascertain the economic sustainability of the trade.

8. CONCLUSION AND LESSONS LEARNED

The overall feedback shows that the framework can be a valuable tool for assessing whether the use of wild animals for food is well managed in the context of commerce, food security, conservation, and public health. The assessment, however, can be conducted more effectively when the scope is narrowed down to individual supply chains.

There should be a diverse selection of stakeholders when this framework is used to evaluate a particular industry, including the social and welfare aspects for which it was more difficult to obtain expert input in this Tanzanian example. At the same time, the methodology to effectively utilize the tool should include a group discussion, to maximize debate on all the indicators before proposing a score.

For efficient utilization of the tool, stakeholder group involved in evaluating sustainability by applying this framework should have a mix of frontline law enforcement officers and high-level decision makers to enable a full analysis of the actual situation on the ground versus the policy and legal framework in place.

Annex 1

Table 2. Matrix of species that can be sold in GMSFs based on their listing in relevant TZ regulations.

	Common Name	Scientific Name	Resident Hunting	Tourist Hunting	Wildlife Captive Facility (if/when operational)	Dangerous Animals Consolation
1	Buffalo	*Syncerus caffer*	☑	☑	☑	☑
2	Bushpig	*Potamochoerus larvatus*		☑	☑	
3	Dik-dik	*Madoqua kirkii*	☑	☑	☑	
4	Eland	*Taurotragus oryx*		☑	☑	
5	Gerenuk	*Litocranius walleri*		☑	☑	
6	Giant Forest Hog	*Hylochoerus meinertzhageni*		☑	☑	
7	Greater kudu	*Tragelaphus strepsiceros*		☑	☑	
8	Coke's Hartebeest	*Alcelaphus buselaphus cokii*	☑	☑	☑	
9	Lichtenstein Hartebeest	*Alcelaphus lichtensteinii*	☑	☑	☑	
10	Hippopotamus	*Hippopotamus amphibius*		☑	☑	☑
11	Impala	*Aepycero;s melamp*	☑	☑	☑	
12	Klipspringer	*Oreotragus oreotragus*		☑	☑	
13	Lesser kudu	*Tragelaphus imberbis*		☑	☑	
14	Oribi	*Ourebia ourebi*		☑	☑	
15	Oryx	*Oryx sp*		☑	☑	
16	Puku	*Kobus vardonii*		☑	☑	
17	Pygmy antelope	*Nesotragus batesi*		☑	☑	
18	Common Duiker	*Sylvicapra grimmia*		☑	☑	
19	Red Duiker	*Cephalophus natalensis*		☑	☑	
20	Abbot's Duiker	*Cephalophus spadix*		☑	☑	
21	Blue Duiker	*Philantomba monticola*		☑	☑	
22	Bohor-Reedbuck	*Redunca redunca*	☑	☑	☑	
23	Mountain Reedbuck	*Redunca fulvorufula*	☑	☑	☑	
24	Southern Reedbuck	*Redunca arundinum*	☑	☑	☑	
25	Roan antelope	*Hippotragus equinus*		☑	☑	
26	Sable antelope	*Hippotragus niger*		☑	☑	
27	Sitatunga	*Tragelaphus spekii*		☑	☑	
28	Stein buck	*Raphicerus campestris*		☑	☑	
29	Thomson Gazelle	*Eudorcas thomsonii*	☑	☑	☑	
30	Grant's Gazelle	*Nanger granti*	☑	☑	☑	
31	Topi	*Damaliscus lunatus jimela*	☑	☑	☑	
32	Warthog	*Phacochoerus africanus*	☑	☑	☑	
33	Common-Waterbuck	*Kobus ellipsiprymnus*	☑	☑	☑	
34	Wildebeest	*Connochaetes taurinus*	☑	☑	☑	
35	Zebra	*Equus quagga*	☑	☑	☑	

Annex 2

Table 3. Participants at the meeting of the Game meat Selling Advisory Committee (GMSAC) on 14 -15 March 2024.

SN	NAME	ORGANIZATION
1	Weja Lugendo	Tanzania Wildlife Management (TAWA)
2	Veronica Mollel	Tanzania Wildlife Management (TAWA)
3	Ibrahim Kanda	Tanzania Wildlife Management (TAWA)
4	Oscar Albano Mbyuzi	Ministry of Livestock and Fisheries (MLF)
5	Anyitike Mwakitalima	Ministry of Health (MoH)
6	Festo Mushi	Tanzania Bureau of Standards (TBS)
7	Kilango Kaiza	Tanzania Bureau of Standards (TBS)
8	Francis Nade	Tanzania Wildlife Farmers and Game meat Sellers Association (TAWIFAGAMSA)
9	Gabriel Shawa	Universal Paragon Links Co. Ltd
10	Joseph Mahanga	Tanzania Meat Board (TMB)
11	Emanuel Isaya	Directorate of Veterinary Services (DVS)
12	Qudra Kagembe	TRAFFIC
14	Miriam Matinda	East Africa Law Society (EALS)
16	Catherine Daniel Mwakyusa	Tanzania Wildlife Farmers and Game meat Sellers Association (TAWIFAGAMSA)

Annex 3

Pictures

Group photo: Members of the GMSAC, TAWIFAGAMSA, and TAWA during the GMSAC technical meeting

TRAFFIC staff giving a short presentation on the 5DSAF to the participants during a GMSAC technical meeting