Arbeitsgemeinschaft
Tropische und Subtropische Agrarforschung (ATSAF) e.V.

Council for Tropical and Subtropical Agricultural Research

ATSAF - CGIAR++ Junior Scientists Program Final Report

Name of student: Teddy Kissi Boateng
University: University of Hohenheim
Supervisor at University: Prof. Dr. Andrea Knierim
International Agricultural Research Center: The Alliance of Bioversity International (Bioversity) and the International Center for Tropical Agriculture (CIAT)
Country: Kenya
Supervisor at IARC: Dr. Celine Termote
Start and end date of stay at IARC: 17 Sep 2021 - 29 Oct 2021
Start and end date of remotely supervised project: -
Title: Sociocultural characteristics of edible but underutilized plant species consumption in the region of Turkana - Kenya

Funded by the German Federal Ministry for Economic Cooperation and Development (BMZ)

Arbeitsgemeinschaft
Tropische und Subtropische Agrarforschung (ATSAF) e.V.

Council for Tropical and Subtropical Agricultural Research

Date : 8th November 2021

Introduction

This field report is a summary of activities conducted during data collection in Kenya for a Masters' thesis on "Sociocultural characteristics of edible but underutilized plant species consumption in the region of Turkana – Kenya". The primary aim for the study is to assess the perception (attitudes) associated with the utilization of agrobiodiversity in predominantly food vulnerable communities in rural Kenya. It is again intended in part to improve local food diversity and promote same in the face of global climate variability. The report covers pre-field, field, and post-field activities.

Date	Location/ Site	Activity	Remark/Description
Pre – Field Activities			
20/09/21 – 13/10/21	Alliance of Biodiversity International office (Nairobi)	Review of data collection tool (1)	(1) Data collection tools (Questionnaires, key informant interview guide) were reviewed with project team (Biodiversity International) at the Head office in Nairobi – Kenya. This was to capture additional information which were not considered during the initial draft of the tools. Again, it was to structure the data collection tools to fit the prevailing circumstances on the ground and thus provide more reliable feedback tailored to the objectives of the study. As a theoretical framework, the theory of planned behaviour (TPB) proposed by Ajzen (1991) was adopted as a guide to measure consumption perception.
		Review of field logistics and data collection procedure (2)	(2) The initial plan of reaching 300 households in six villages was trimmed to 80 households. This was to avoid any logistical complications looking at the nature of the study area, length of time, resources and to a greater extent the level of the study requirement (Master thesis). Two field assistants were employed to assist in the data collection. Forty households each was mapped for both pastoralists and agro-pastoralists communities respectively. For each livelihood community, 20 households headed by men and women was proposed to be reached.

16/10/21 – 18/10/21	Turkana - Lodwar	Recruiting and training of research support team (1) Pre-test of survey tools (2)	(1) Two research/field assistants were recruited and trained for data collection. A two-day training programme was design for this purpose. They were first exposed to the objectives of the study, procedure for identifying of participants, sampling strategy, questionnaire administration, recording of responses, and respect for ethical consent of participants. They were responsible for translating the questionnaire into local language (Turkana). The two (field assistants) had previously worked with Biodiversity International as enumerators in previous projects in Turkana County and therefore were familiar with the two communities to be visited and the wild edible but underutilized plants under investigation. They had background in food nutrition and agricultural studies. (2) The second day of training was used to test the questionnaires and the functioning of the mobile data collecting device (Kobo toolbox). Two households were visited at Kanamkemer (a suburb of Lodwar – capital of Turkana) for this purpose. It gave enumerators an overview of the expected time to administer the questionnaire. It provided the opportunity to revise some of the questions and responses. Through the pre – test, some of the questions were made mandatory for enumerator to ask respondents. Feedback from the pre-test was incorporated and redeployed into the mobile data collecting device for the actual data collection.
Field Activities			
19.10.21 – 26.10.21	Turkana – villages in Loima sub – county.	Engaging key informants (1)	(1) Identified key informants were reached and informed about the study and its objectives through the assistance of community health volunteers (CHV). They were community health extension officers/nutrition workers and community elders/chiefs. Six community elders provided in-depth responses about the wild edible plant species understudy. The study ensured that for each of the villages visited, a

		Data collection (2)	community elder/chief was interviewed. Two community health extension officers/nutritionists were interviewed on the nutritional status, trend, and strategies for promoting dietary diversity within the villages. (2) Data was collected from six villages in two livelihood communities. The communities were Napeikar (agro-pastoralist – Kaakiring, Kodopa and Nabuin) and Ata Lakamusio (Pastoralist – Lakapeltau, Kakoree and Ngikorikipi). Forty households in each livelihood community were covered for the study. The two communities were conveniently selected based on an earlier baseline study on the prevalence of the four identified species within the villages. A consent to participate in the study was sought before proceeding to interview the households. Prior to this, an ethical clearance for the study was given under the certification for the main project on dietary diversity initiated and ongoing by Biodiversity International from Amref Ethics Review Committee – Nairobi (Kenya). A snowball sampling technique was used to identify both male and female headed households with Community Health Volunteers (CHVs) as guide. However, the criterion for selecting a respondent was based on whether they were knowledgeable about the wild edible plant species understudy and have consumed same in the past. This was a very important prerequisite for the administration of questionnaires. A participatory approach was adopted to engage participants (10) on the issue of the most effective method for information dissemination and the promotion of dietary diversity within the village. This took place in all the six villages visited. In addition, 20 respondents were conveniently selected at Lodwar to assess their knowledge, attitude, and practice relative to the consumption of the species understudy. This was to compare whether respondents from urban/peri-urban areas

		Debriefing (3)	had a different perception/attitude toward the consumption of these identified underutilized species. On the economic potential of the understudied wild species, six vegetable vendors were randomly selected from Lodwar central market for this purpose. A semi-structured interview was applied to elicit information on the economic potential of two of the species (Leptadenia – ekamango and Corchorus – murere). The two were selected based on the responses provided by respondents. (3) This was held daily at the end of every data collection to know the peculiar challenges in each village encountered by enumerators. It was to deploy the best appropriate alternative approach in dealing with similar occurrences. It was helpful as it provided the opportunity to share ideas between enumerators and researcher.
Post-Field Activities			
28/10/21 – 29/10/21	Head Office (Biodiversity International)	Field briefing and final courtesies (1)	(1) Summary of field activity report was shared with the office. Issues such as cleaning of the field data and developing a code book for variables, data collection method, and future possible work were discussed. A brief presentation of preliminary findings was shared with the office.

Observation

The four species understudy are widely known by members of the villages the research team visited. Consumption had been part of their nomadic and community lifestyle for decades. Most consumption is in part due to less diversified food alternative (fruit and vegetable) though reasons of cultural identity were profound. Turkana is indeed Kenya's example of extreme climate vulnerability and is prone to severe drought and food insecurity. Majority of respondents were opened and friendly to engage enumerators. For most households especially those in the pastoralist community, many of the household heads were hard to find due to migration to

neighbouring villages and preferably Uganda to secure fodder/pasture (majority had moved with their livestock). In such cases, enumerators were asked to use spouses for households whose heads were inaccessible.

Acknowledgement

The researcher is very grateful to Biodiversity International for hosting him for the number of days spent in Kenya particularly at the office and the warm reception he received from the office staff. The researcher is thankful again to Biodiversity International for providing the internal logistics for the field data collection. Particular appreciation goes to Dr. Celine Termote (Biodiversity International Country Representative) for her critical review of the survey tools and her numerous recommendations. To Mr. Francis Oduor for providing the pre-travel arrangement and accommodation in Kenya, technical input especially for getting the question into a mobile data collecting device (Kobo toolbox) and providing field support for the number of days spent in the field, the researcher is highly appreciative. Many thanks go to the enumerators who helped to gather both household and key informants' responses for the study. To the driver who drove the team to the villages on daily basis, the researcher is abundantly grateful. The last but not the least is to appreciate the financial assistance provided by ATSAF Junior Scientists Program for the lifetime opportunity the researcher enjoyed in travelling to Kenya for the data collection. The researcher is highly indebted to ATSAF for the learning experience with Biodiversity International through the grant.

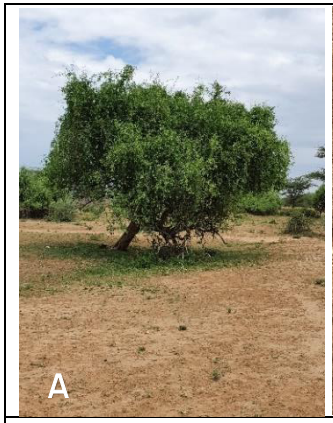
Conclusion

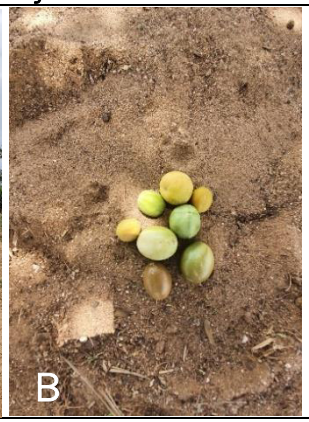
Global climate change has impacted various food systems around the world and will continue to do so at an alarming rate if business as usual persist. For communities to be self-resilient and food sufficient, the application of agrobiodiversity to diversify dietary intake is relevant. To make this work, food consumption perception (attitude/intention) is important to understand the level of preference people and communities attach to food. Knowledge and perception associated with food are in part, one way of halving food insecurity in most vulnerable communities especially in developing countries where evidence of the diversity of wild edible plant species exists. The field work for this study offered me the opportunity to explore in detail these perceptions attached to the consumption of wild edible foods. Such appreciation is rightful to promote food policy in most food vulnerable communities.

Arbeitsgemeinschaft
Tropische und Subtropische Agrarforschung (ATSAF) e.V.

Council for Tropical and Subtropical Agricultural Research

Field Photo Gallery





A = Plant of ebei (Balanites) **B** = Fruits of ebei

C = Plant of ekalale (Ziziphus) **D** = Fruits of ekalale

E =Leaves of ekamango (Leptadenia)

F = Leaves of murere (Corchorus)

G = Enumerator interviewing a respondent	**H** = Household kitchen garden (An intervention by Biodiversity International and Save The Children – NGO to deal with food security). Vegetables like spinach, kale, onion, cowpea are mostly found in these kitchen gardens.	**I** = Researcher doing a market survey	**J** = Researcher with two enumerators (those in red T-shirt) and a driver (in black hat)