

## RESEARCH REPORT

### Study on the Identification of Traditional Game 'KALIK' in Timor-Leste



Vicente de Paulo Correia, PhD  
Matias Tavares, PhD  
Oscar da Silva, MSc

Faculty of Agriculture National University of Timor Lorosa'e (UNTL)  
And GIZ Timor-Leste

2021



## ACKNOWLEDGEMENTS

First of all we want to thank GIZ, which provided us with support to conduct this research project. Our thanks also go to Mr. Malte Maschitzki and Annette Funk from GIZ Timor-Leste, who always provides us with valuable guidance and support in relation to this research project and also the directors of Physical Sports at the Secretariate of State of Sport and Youth for their guidance and support.

Our thanks also go to the final year students from the department of Agro-Socio Economy and the department of Physical Education. Particular thanks also go to the Rector of UNTL, Dr Joao Martins, Dean of Agriculture Faculty, Dr Carlito de Araujo Mali Code, and the head of the Department of Socio-Economics, Dr Mateus Gomes for their support. Finally, our thanks go to the local authorities and other stakeholders in Bobonaro, Ermera, Manatuto, Manufahi, Baucau, Viqueque and Lautem, for their guidance and support during this study.

## RESEARCHERS AND ENUMERATORS

Researchers	Position	Institution
Vicente de Paulo Correia, Ph.D	Coordinator/Researcher	Faculty of Agriculture - UNTL
Matias Tavares, Ph.D	Researcher	Faculty of Agriculture - UNTL
Oscar da Silva, MSc	Researcher	Faculty of Agriculture - UNTL
Delfim Vas	Enumerator	Faculty of Agriculture - UNTL
Mateus M. de Araujo	Enumerator	Faculty of Education - UNTL
Mujahidin Amaral	Enumerator	Faculty of Education - UNTL
Trifonia M.I. Mesquita	Enumerator	Faculty of Education - UNTL
Jacinto Pereira Kase	Enumerator	Faculty of Education - UNTL

## TABLE OF CONTENT

Title page .....	i
Acknowledgement.....	ii
Researchers and enumerators .....	ii
Table of contents .....	iii
List of tables .....	iv
List of figures .....	iv
List of Appendix .....	iv
Executive summary .....	v
I. BACKGROUND .....	1
II. AIMS AND OBJECTIVES .....	2
III. RESEARCH APPROACH.....	2
IV. REVIEW OF LITERATURE .....	5
V. RESULT AND DISCUSSIONS .....	8
5.1 Characteristic of Respondent .....	8
5.2 The History of Kalik Game in Timor-Leste .....	8
5.3 Originality of Kalik Game as Traditional Game in Timor-Leste.....	9
5.4 Cultural Significance of the Game .....	10
5.5 The Main Purpose of Playing Kalik Game .....	11
5.6 The Rules and Requirements in Playing Kalik Game .....	12
5.7 How Kalik Game Evolve, Conserved and Transmitted Over Generations.....	20
VI. CONCLUSION AND RECOMMENDATION .....	24
6.1 Conclusion .....	24
6.2 Recommendation .....	25
REFERENCE .....	26
APPENDIX .....	27

## LIST OF TABLES

Table 1: Linkage between research question and information to be collected .....	4
Table 2: Proposed sample distribution .....	4
Table 3: Scientific name of Kalik and common names .....	5
Table 4: Traditional use of Kalik .....	7
Table 5: Distribution of respondents per municipality .....	8
Table 6: Specific rules for Hole model .....	15
Table 7: Specific rules for Standing model .....	17
Table 8: Specific rules for Square line model .....	19
Table 9: Factors contributed to the unpopularity of Kalik game in Timor-Leste.....	21
Table 10: Main reason for keeping Kalik game alive in Wairoke – Luro .....	23

## LIST OF FIGURES

Figure 1: Data analysis process .....	3
Figure 2a: Hole model line without line boundary close to the hole .....	14
Figure 2b: Hole model line with line boundary close to the hole .....	14
Figure 3: Standing model of Kalik game .....	16
Figure 4a: Square line model with Kalik position frontally towards player .....	18
Figure 4b: Square line model with Kalik position laterally towards player .....	18
Figure 5: Jot down/Apontador model .....	20

## LIST OF APPENDIXES

Appendix 1: List name of Stakeholders interviewed .....	27
Appendix 2: Photo's Activities .....	28

## EXECUTIVE SUMMARY

There are various traditional games played by children and young adults in Timor-Leste that existed in the past such as Kalik game, Tapa, Paulito, Piaun, Berlindis, Tebe aifunan, Ta ulun, and so on. Some of these traditional games are still exists but some are not exist anymore including Kalik game

One of the activities of the Youth for Change program is to empower stakeholders in the youth sector and this including promoting traditional games such as Kalik, which is rooted in a number of municipalities and played mostly by the youth. Research about traditional sports and games is also part of the sport policy of Timor-Leste.

This study is carried out with the aim to identify traditional children's and youth games and to reintroduce these games to children and youth and the general public. Therefore, it is important for the present generation to preserve, promote and relive Timor-Leste's traditional children's and youth games and to pass them on to the next generation.

The general objective of this study is to explore and identify the originality of a traditional game in Timor-Leste. This study was conducted in seven municipalities including Baucau, Viqueque, Lautem, Manatuto, Manufahi, Ermera and Bobonaro. The method used for this study was qualitative methods.

The respondents of this study constituted of individuals and groups who knows and have experience of playing Kalik game in the past and present, households and community leaders and the elderly, with the total of 126 respondents. Interview with these respondents applied Saturation Method approach. The composition of gender is 96.2 per cent male with the average age of 57.3 years old. Male dominates the gender composition as this kind of game mostly played by male children and young adults compared to female children. The majority of respondents are farmers, teachers and civil servant with an average of 10 years experiencing in playing Kalik game.

In Timor-Leste, Kalik is not only being used as traditional food and medicines however, it is also used in the Traditional Sporting Games called "*Hana/Tuda Kalik*" which mostly played among children and young adults mainly male. "Hana /tuda kalik" is well known and played by the community of Timor-Leste, both in the village and town, although it is less played nowadays compared to the past.

Kalik game has been played mainly among children's and young adults (7-17 years old) in 7 municipalities for generations throughout the history of Timor-Leste's society. The majority of respondents argued that Kalik game first time introduced by Timorese ancestors long time ago before the Portuguese arrival. By the time this game was transmitted over the generation until now. This game rooted in Timor-Leste however, there is no clear date regarding when and where Kalik game was first introduced and played. Most of respondents described that; this game mostly played during Portuguese time and by then it slowly disappeared as Indonesia invades Timor-Leste.

There is no formal training or instruction on how to play Kalik game rather their parents (grandfather and dad's) and colleagues teach them how to play the game. Indeed, some respondents pointed out they learn by their own by watching other people paying. Through the Key Informant Interview, it reveals that Kalik games were creative – play out of pure imagination and items lying around – and children, as well as young adults alike, invented them to keep them entertained.

In relation to *originality of Kalik game* as a traditional game in this country, 98.5 per cent respondents agree that Kalik game originally is from Timor-Leste. The main reason for this claim is first, from the time of their ancestor Kalik game was already exist and played; secondly, this game played from generation to generation over time; and lastly Kalik is growing well in most of the areas in Timor-Leste.

The study revealed that in some areas (e.g., Sanirin, Ponilala, and Venilale), talking about Kalik always link to *culture (Uma Lulik)* and therefore Kalik become a kind of product that anyone cannot discuss freely without permission from the elders or representative of the Uma Lulik – the reason is that it believe there will be a consequences in terms of sickness or death for someone who discuss about Kalik without noticed to the elderly from the Uma Lulik. However, this kind of permission do not have relation with paying Kalik game; means anyone else can play Kalik at any time anywhere as they agreed to play except discuss about it.

The study revealed that in some areas (e.g., Sanirin, Ponilala, and Venilale), talking about Kalik always link to culture (Uma Lulik) and therefore Kalik become a kind of product that anyone who come from Uma Lulik link to Kalik cannot discuss or talking about Kalik without permission from the elders or representative of that Uma Lulik – the reason is that it believe there will be a consequences in terms of sickness or death for someone who discuss about Kalik without noticed to the elderly. However, this kind of permission do not have relation with playing Kalik game; means anyone else can play Kalik at any time anywhere as they agreed to play except discuss about it. In addition, for those who not belong to that Uma Lulik they can discuss or talking about Kalik freely.

In addition, Kalik game in Timor-Leste is a kind of game that shows the representations, expressions, knowledge, skills and the object (Kalik) and cultural that associated with Timorese community or groups in the past - and in some cases individual and groups recognize as part of their cultural heritage.

The *main purpose* of children's and young adults playing Kalik game is to be happy, to make more friends, to learn how to count and also languages, to entertain people, spend leisure time, and just for fun. In some cases, the game can be played between different groups from different villages; so, the game itself makes players/people to know each other and in the end all of them became friends and relatives. Some respondent's claims that playing Kalik game also teach players how to count basic numbers. This is because to decide who is the winner in the game, players need to count for a certain number as agreed.

Kalik game turns out to be played in various ways. The game can be *played individually and collectively as a group*. Played individually can be up to 5 players; whiles in groups, the two groups or team that against each other must be with the same players. The player in each team can be between two to five players.

To be able to perform Kalik game, the minimums requirements need to be available are the Playing Field - which is flat, no muddy, no grass, and no rocky on the service; and the Equipment – in this case Kalik bean with the minimum number needed is equal to the number of players.

It is commonly agreed that Kalik game is a competition for accuracy in shooting or archery. The aim is to shoot/hit or throws down Kalik bean from the opponent to reach the agreed winning/championship/finish points that are decided before started the game

The result of the study shows that the modality of Kalik game can be categorized into five models, which includes 1) the hole model 2) The rectangular line model 3) The standing model 4) The Jot down model 5) The kneeling model. However, between those models, *the hole and standing models are the two models most popular* one being played in the past, and it is still played by children in the village of Wairoke today.

The Kalik game, however, started to lose its popularity among children's and young adults during the Indonesian occupation; and this traditional game is increasingly become unpopular or even extinct/disappear in most of Timor-Leste territories, after the country restored its independence onward.

Some of the factors contributed to the unpopularity of the Kalik game in Timor-Leste, during the Indonesian occupation and post-independent include 1) The availability of various toys and games; 2) The game was never part of school curriculum including school extracurricular activity; 3) Most of young generation don't know how to play the game, as there was no exemplar from their parents/previous generation, neighbour, or surrounding areas; and 4) The influence of modern technology such as Hand Phone - as children can easily access Facebook, YouTube, and various modern online games.

Throughout the study, it is identified that Kalik game still entertains today by the children's; boys and girls, young adults; men and women, and even the elderly in one of a very remote village named Wairoke – Luro, Lautem. Community in Wairoke keep Kalik game alive is because this village is very remote and quite isolated from the outsider.

Elderly/parents in Wairoke pointed out the important reasons to preserve the game of Kalik for their children includes first, Kalik game is considered as the traditional game that has been played and passed on for generations; second, conserving Kalik game especially for children means to cut out any costs related to the purchasing of modern game/toys; and lastly, Kalik beans are offered by the nature, it is free and sustained naturally.

From the point of view of history and culture, Kalik game is rooted in this country. However, by the time Kalik game become unpopular or even extinct from Timor-Leste. To avoid further extinction of this traditional game and make it alive for present and future generation, it is recommended: 1) To introduce Kalik game in schools as part of the curriculum – extracurricular activities; 2) To have a formal competition regularly for Kalik game at school or community in general; 3) To register Kalik game to UNESCO as part of the heritage of Timor-Leste; 4) For relevant institutions to actively promote Kalik game as a traditional game to younger generation; 5) Cooperation between relevant institutions is needed to avoid the extinctions of Kalik plant due to human interventions or climate change; and 6) Further study is needed to find out more information regarding Kalik game.

## I. BACKGROUND

Timor-Leste is a country that rich in heritage and culture including a number of different ethnic groups and languages. Because of this, there are also various traditional games (played by children and youth) that existed in the past such as Kalik game, Tapa, Paulito, Piaun, Berlindis, Tebe aifunan, Ta ulun, Tebe malun and so on. Some of these traditional games are still exists but some are not existing anymore. With the development of digital technologies however, traditional games that were once very popular in Timor-Leste's society are now slowing fading away particularly Kalik game.

The Government Resolution N.º 48/2017 on National Policy for the Development of Sport in Timor-Leste stated that the development of educational sport as a physical education and sport are instruments that can have an influence to safeguard a good physical health and mental, enhance social cooperation's, promote intellectuality and culture of respect, stimulate social relations, promote solidarity and tolerance and the capitalization of economic development (Jornal da Republica 2017, p.1484).

The development of traditional sport comes directly from a promotion of social values transmitted in practice and integrated to a public form that allows all to understand, learn and practice (Jornal da Republica 2017). In the actual context of Timor-Leste, it's not yet promoted the development of traditional sport. The traditional sport allows the public to know its history, identity and cultural values. This aspect help communities to develop their knowledge which can contribute more to the national development.

One of the programs to maximize the potential of the youth in this country is the Youth for Change program which is working jointly between the State Secretariat for Youth and Sports to empower stakeholders in the youth sector including promoting traditional games such as Kalik, which is rooted in a number of municipalities and played, mostly by the youth. Through the Traditional Games and Sport (TGS) in Timor-Leste, it offers an opportunity to develop Kalik game as part of traditional game for this country. However, there is a lack of data or information related to this type of game.

Traditional games in Timor-Leste existed without any written rules, and most of the games no longer played, including the Kalik game. Therefore, it makes it difficult to reintroduce the Kalik game to school-aged children, and future generation of Timor-Leste. In particular, this traditional game to be included in the school curriculum and make it officially recognized and competed formally. In addition to that, it is important to register the traditional game of Timor-Leste at the international level and competed internationally. This become even more difficult without knowing the story and the originality of the game, minimum requirements and rules associated with the game.

To identify the game of Kalik and any information attached to it therefore it is important to do some studies related to this issue so that further development of this kind of traditional game can be further develop as part of the original traditional game from Timor-Leste.

This study is carried, with the aim to identify traditional children's and youth games and to reintroduce these games to children and youth and the general public. Therefore, it is important for the present generation to preserve, promote and relive Timor-Leste's traditional children's and youth games and to pass them on to the next generation.

## **II. AIMS AND OBJECTIVE**

Based on the Terms of Reference of the project, this study/project aims to explore the game of 'Kalik' as a traditional game and sport in Timor-Leste that could be accepted, registered and promoted internationally. To achieve this aim, this study addresses the four following aspects:

- ❖ The importance of understanding the originality and the history of the 'Kalik' game in Timor-Leste.
- ❖ The importance to understand the rules and requirements of the 'Kalik' game
- ❖ The importance to understand the cultural significance of 'Kalik' game
- ❖ The importance to promote 'Kalik' game as a traditional game and sport in Timor-Leste and globally.

The general objective of this study is to explore and identify the originality of a traditional game of Kalik in 7 municipalities in Timor-Leste. The specific objective is:

- ❖ To identify the originality of Kalik as a traditional game
- ❖ To identify the rules and requirements in playing such game
- ❖ To identify the history of Kalik as a game in Timor-Leste
- ❖ To explore the cultural significance of the game Kalik
- ❖ To explore and promote Kalik as a traditional game of Timor-Leste

## **III. RESEARCH APPROACH**

This study was conducted in seven municipalities including Baucau, Viqueque and Lautem (East), Manatuto and Manufahi (South) and Ermera and Bobonaro (West). In addition, the approach used for conducting the study constituted of two categories namely technical preparation and data gathering from the fields.

For the Technical Preparation, the research team develop the questionnaires based on the objectives of the study as mentioned in ToR. The focus areas of information and data covered are demographic characteristics, the originality of Kalik, rules and requirements in playing Kalik game, timing in playing the game, the usefulness of Kalik, who involve in playing such a game, the importance and cultural significance of Kalik game, the existence of kalik game in present time, and so on. This information will be gathered through data collection and information from household level in the study sites.

In terms of the process of data gathering from the fields, prior to the data gathering, all enumerators were trained by the research team on how to use the questionnaires and how to lead and generating a narrative from Focus Group Discussion (FGDs). Data collecting was

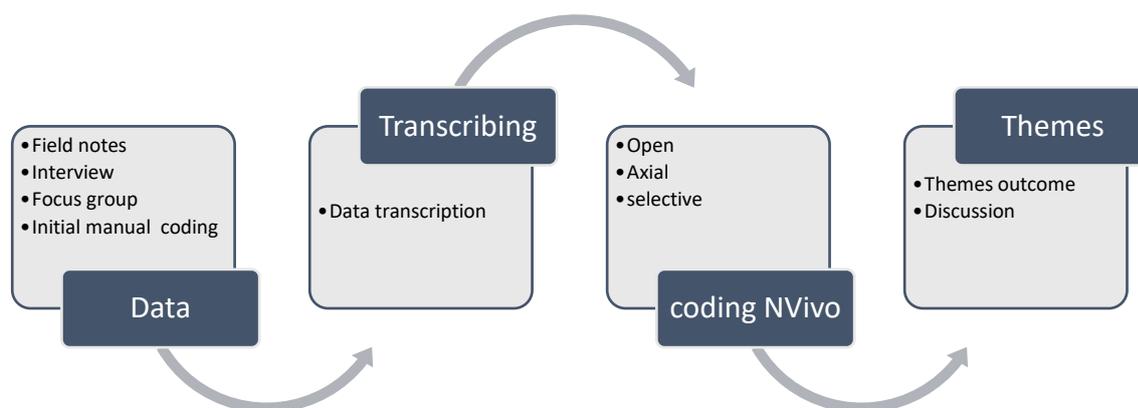
conducted at daytime but all enumerators and the research team adjust the availability of the time of households to be interviewed or engaged in-group discussion.

The method used for this study was purely qualitative methods. Data gathered include primary and secondary data, and the data gathering methods employed include face-to-face interviews, rapid rural appraisals, and desk top research of current and related literature. The participatory rapid appraisal approach used to get data and information, technically by direct interview, in-depth interview, and FGD are the tools for collecting data and information from households and other related groups of the community in the study sites.

To facilitate the development of data collection tools, and identify a research approach in this study, the following questions were posed:

1. When and where (in Timor-Leste) 'Kalik' game was for the first time introduced and played?
2. What is the main purpose of playing 'Kalik' game?
3. How 'Kalik' game evolved, conserved and transmitted over generations?
4. What is the traditional story/cultural significance behind the game of 'Kalik' game? (If any)
5. What are the rules and requirements in playing 'Kalik' game?

Data collected through interviews and focus groups together with notes taken in the field manually coded at the initial stage of the investigation to identify the general themes arising during the data collection process. This assists the researcher determine whether the interview and data collection should be expanded and extended. Content analysis within textual data can only be meaningful for analysis and interpretation when it is coded or labeled (Blair 2015). Three coding steps were followed in this investigation; open, axial and selective coding. Open coding involves applying codes that are derived from the text (emergent coding). Axial coding identifies the relationship between open codes and integrates them into their subcategories. Selective coding is the final stage of the coding process where categories and subcategories are refined and integrated to identify emerging concepts or themes from the coded data.



Updated from: Strauss 1998

Figure 1. Data analysis process

In addition, data/information collected are varies to answer each specific question posed in this research as shown in Table 1.

*Table 1. Linkages between research questions and data/information to be collected*

Research questions	Data/information to be collected
1. When and where (in Timor-Leste) 'Kalik' game was for the first time introduced and played?	Where/Time for the first time an individual/community get introduced to 'Kalik' game; Story at the time of its introduction...
2. What is the main purpose/motive of playing 'Kalik' game?	Reasons/motives of playing 'Kalik' game (creativity/accuracy/determination/coordination/and or physical fitness)
3. How 'Kalik' game evolved, conserved and transmitted over generations?	Story from elders: transfer the information and introduce 'Kalik' game to next/young generation; changes in role and requirement of playing 'Kalik' game over time; perspective/observation on the current game of 'Kalik' game (Popularity/enthusiasm)
4. What is the traditional story/cultural significance behind the game of 'Kalik' game? (If any)	Traditional story behind the game, cultural/traditional value attached to the game....
5. What are the rules and requirements in playing 'Kalik' game?	Rule of playing 'Kalik' game (Start – finish), and its requirements (number of players, materials needed), changes observes overtime

The sample for this study composed of individuals and groups who knows and have experience playing Kalik game in the past and present, households and community leaders and the elderly, with the total of 246 respondents. Interview with these respondents applied Saturation Method approach. For example, if the data is collected and the answer all the same for about 10 to 15 respondents in one site than the interview was stop. This is because if the interview continues the answer is not far from the previous answer. If there are still significant differences on the results of the interview, then it will continue the interview until it reaches the number of respondents as shown in Table below. For FGD, there were 6 groups, which will participate in the group discussion.

*Table 2. Proposed Sample distribution*

Municipalities	Household community	Community leader	Elderly	Players of Kalik game (past & present)	Total
Baucau	5	5	5	25	40
Viqueque	5	5	5	25	40
Manatuto	5	5	5	25	40
Manufahi	5	5	5	25	40
Ermera	5	5	5	25	40
Bobonaro	5	5	5	25	40
Lautem	1	2	1	2	6
					<b>246</b>

#### IV. REVIEW OF LITERATURE

UNESCO (2003) defined intangible cultural heritage as “The ‘intangible cultural heritage’ means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts, and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage.” According to this definition, Traditional Sporting Games (TSG) constitute a cultural heritage, since they are manifestations that are expressed through body language, that is, motor actions (Caillois, 2001; Sutton-Smith, 2001; Huizinga, 2010).

TSG are the main asset of physical education to enhance the local culture. These traditional activities constitute a cultural legacy in the respectful way of relating to others and also to the environment. Moreover, UNESCO’s 2030 agenda (UNESCO, 2017) establishes “respect for the environment and sustainability education as key elements for the challenges of society.”

According to Parlebas (2001), TSG correspond to “sporting games, frequently rooted in a long cultural tradition, which have not been regulated by official authorities.” The rules of these games bear the distinctive characteristics of the local culture and show the great diversity that characterizes the immaterial recreational heritage. When an activity does not have rules, it means that the way of playing is very open, allowing the practice conditions to be continuously modified, the reason why these activities are called “quasi-games” (Parlebas, 2001).

##### 4.1 Scientific name, Common Names and Name in other Language

Kalik categorizes as a genus of flowering plants/Entada, in the pae family. The characteristics of Kalik in Latin/scientific name called “*Entada phaseoloides*” commonly also named the box bean or St. Thomas’ bean. The plant is native to tropical Africa (Sierra Leone to Tanzania, Madagascar); tropical Asia (India to South China and Malaysia) and tropical north Australia. More detail about the name of Kalik from some countries are shown in Table below. (<https://pfaf.org/user/Plant.aspx?LatinName=Entada+phaseoloides>)

Table 3. Scientific name of KALIK and common names

Name		KALIK Bean
Scientific name	Entada phaseoloides	
Native	Tropical Africa: Sierra Leone to Tanzania, Madagascar; Tropical Asia: India to South China and Malaysia; and tropical north Australia.	
Common names	Cali Bean, Calinut, Elephant creeper, Elva Climber, Gila Bean, Go-go, Go-go Vine, Gogo, Mackay Bean, Nicker Bean, Sea Bean, Sea Heart, St Thomas Bean	
Name in other Languages	English	Cali bean, Elephant creeper, Elva climber, Gila bean, Gogo vine, Matchbox bean, Monkey ladder pod, St. Thomas bean
	Portuguese	Cipó-da-beira-mar
	Indonesia	Bendoh, Gandu, Chariyu
	French	Entada de Formose, Coeur de la mer, Coeur de singe, Wawa
	Mexico	Alampepe
	Philippines	Tamayan, Balonos, Gogo, Bayogo, Kessing,
	Spanish	Alampepe, Bejuco parta, Cobalanga, Habo, Ojo de buey
	Samoa	Tupe
Columbia	Bejuco Parta, Habo, Ojo De Buey, Parta	

Source: <https://pfaf.org/user/Plant.aspx?LatinName=Entada+phaseoloides>

## 4.2 The description of Kalik plant and Bean

Kalik or St. Thomas' bean is actually a large, woody, branched, evergreen climbing vine that grows about 100 m long and 18 cm in diameter. The plant usually grows in wide variety of habitats, ranging from freshwater swamp and inland from the mangrove up to montane forest where it flourishes in productive number and used by locals mainly for its medicinal and cosmetic properties ([http://en.hortipedia.com/wiki/Entada\\_phaseoloides](http://en.hortipedia.com/wiki/Entada_phaseoloides)). Kalik bean is characterized by its relatively large appearance, with mature plants usually seen climbing large trees, with its thick tendrils surrounding the bark of the 'host' tree. It is notable for its thick, dark brown bark, which is often harvested by locals for its cosmetic uses.



Fertile flowers are followed by characteristic pods that can grow very large, up to 2 m (6 ft. 7 in) long and 130 mm (5.1 in) wide, somewhat curved, slightly restricted between the seeds. Each pod consists of between 10 and 20 reddish brown seeds that are circular, hard and lens-shaped with their sides flattened and about 40 to 60 mm (1.6 to 2.4 in) in diameter. These chocolate-brown hued seeds are used by locals medicinally. As with a wide variety of other folkloric herbs, every part of the St Thomas bean may be used therapeutically, with each constituent part possessing its own medicinal value and curative property. Picture below shows the original tree of Kalik and its fruits (<https://www.wikidata.org/wiki/Q3281753>).

## 4.3 The benefit of Kalik bean

According to Gunn et al., (1976) there was a number of popular health benefits of using Kalik bean, and this includes: 1) *Anti-Cancer*; Saponin extracted from *Entada phaseoloides* seeds can efficiently protect cell membrane and prevent cell aging, dilate blood vessels, lower blood pressure and blood sugar, improve liver cell protein and DNA synthesis, and most importantly it can considerably prevent the growth of cervical cancer 2) *Prevents Bleeding*; powdered of Kalik bean seeds are taken with congee to stop bleeding caused by haemorrhoids. *Entada phaseoloides* seed and honey locust seed are roasted and powdered; the powder is taken with warm wine to treat gastrointestinal bleeding.



## 4.4 Traditional uses of Kalik bean

The plant of Kalik bean can be used for some traditional uses including for muscle pain, treatment of hernia, traditional system of medicine in Asia, hair wash and soap, fever and headache (Cribb and Cribb 1982). The details of the traditional uses of Kalik are shown in Table below.

Table 4. Traditional use of Kalik

Part of Kalik plant	Traditional use
Juice of the stem	Drunk to relieve rheumatic joint and muscle pains, and to treat respiratory ailments
Decoction of the stem	Drunk for the treatment of hernia, fish poisoning and gonorrhoea
Juice of the roots	Given for ulcers, abdominal muscle spasms and headaches
Fruits	are considered as a contraceptive
Kernels of the seeds	Are mashed and used for poultices for children having colic
Juice proper of the bark	Used for conjunctivitis in Philippines
Paste of seeds	Applied to inflammatory glandular swellings in the axilla, pains of the loins and joints, swelling of the hands and feet when caused by general debility.
Seeds and bark	Are rich in saponins and have been used as hair wash and soap
Decoction of the seed paste	Has been used for washing wounds and itches
Roasted seeds	Are eaten by women as a depurative in post-partum and are administered in small doses for stomach-ache, as an emetic, and are a component in some compound medicines
Smashed seeds	Are used to poultice abdominal complaints, such as colic of children

Source: Cribb & Cribb 1982

Despite the traditional use of Kalik as mentioned, Bosch (2011) described Kalik is also apply for culinary uses which includes seeds are soaked and roasted prior to eating, roasted seeds are used as a coffee substitute; young leaves can be eaten as a vegetable; the seeds are edible cooked; leaves are eaten both raw and cooked; Kalik bean is cultivated for food and detergent production in the Philippines, India to South China and Java; seed kernels are eaten after removal of the hard seed coats and after careful preparation by boiling or roasting; and soaked seed kernels are roasted, boiled and eaten by northeast tribal groups .

In addition, other uses of Kalik is as follows:

- ❖ The large seeds are used as beads in necklaces;
- ❖ Cut in half, the empty seed-coats can be used to make leg-rattles for dancers;
- ❖ Seeds are also used in *games, as baby teeters, and as match boxes*;
- ❖ Fibbers from the bark are manufactured into ropes, sails and nets;
- ❖ The seed oil is used as fuel;
- ❖ The seeds are also used in making rosaries;
- ❖ They were also used as *playing pieces in an ancient disc-throwing game, lafo*;
- ❖ In Tonga, it is used for medicinal purposes and *formerly the large seeds were used as a throwing piece in native games*

Despite the usefulness of Kalik as mentioned however, there is a lack of literature or studies related to the use of Kalik as a game for children and youth. Even though in some countries people use large seeds in native games but there is no further writing document or sources for this kind of game.

In the context of Timor-Leste, Kalik is not only being used as traditional food and medicines (Erskine et al., 2015) however, it is also used in the Traditional Sporting Games called

“*Hana/Tuda Kalik*” which mostly played among children and young adults mainly male. “Hana /tuda kalik” is well known and played by the community of Timor-Leste, both in the village and town, although it is less played nowadays compared to the past. The survey on traditional sports in Timor-Leste carried out by Luta Hamutuk indicates that “Hana /tuda kalik” is still played by children/young adults in a number of municipalities’ across Timor-Leste (Luta Hamutuk 2015). Even though in the past Hana/Tuda Kalik is well known in Timor-Leste, however there is an evident that publication on this game are scarce.

## V. FINDINGS AND DISCUSSIONS

### 5.1 Characteristics of Respondents

The respondents of this study constituted of individuals and groups who knows and have experience of playing Kalik game in the past and present, households and community leaders and the elderly, with the total of 126 respondents or 51.2 per cent of the total sample proposed. This is due to the saturation method approach used in the interview, which shows that most of the questions answered indicated the similarities for a number of respondents. Respondents are coming from 7 municipalities, 14 sub-administrative and 36 villages. The detail of the distribution of the respondents per municipality is shown in Table below.

Table 5. Distribution of respondents per municipality

No	Municipality	Percentage (%)
1	Bobonaro	22.7
2	Ermera	24.2
3	Manatuto	12.9
4	Manufahi	12.9
5	Baucau	12.1
6	Viqueque	13.6
7	Lautem	1.6

The composition of gender is 96.2 per cent male and 3.8 per cent female with the average age of 57.3 years old. Male dominates the gender composition as this kind of game mostly played by male children and young adults compared to female children. In terms of the education, 18.2 per cent finished primary school, 50.7 per cent secondary school, 13.0 per cent university and 18.1 per cent is not school at all. The majority of respondents are farmers, teachers and civil servant with an average of 10 years experiencing in playing Kalik game.

### 5.2 The History of Kalik Game in Timor-Leste

In the past, Kalik game is one of the traditional games played by children’s and young adults in Timor-Leste. From the very early times of Portuguese era there was various traditional games played by children and young adults in Timor-Leste with the purpose of recreation and amusement among Timorese people. Even though there are difference in language, food habits

and others however, the traditional games such as Kalik game were more or less same though the name and their rules differ from one place to another.

From the interview with KIIs and FGDs, the majority of respondents pointed out that Kalik game first time introduced by Timorese ancestors long time ago before the Portuguese arrival. By the time this game was transmitted over the generation until now. This game rooted in Timor-Leste however, there is no clear date regarding when and where Kalik game was first introduce and play. Most of respondents described that this game mostly played during Portuguese time and by then it slowly disappeared as Indonesia invade Timor-Leste.

This study also revealed that respondents generally hear and learn for the first time how to play Kalik game from their grandfather and dad's (22.7%), follow their colleagues or seniors (61.2%), and learn by their own and teachers (16.1%). This shows that there is no formal training or instructions on how to play Kalik game, rather follow-up players who play Kalik game in school and in other places.

According to Mr Tomas das Neves (Lia Na'in – Ermera) many of them have no doubt heard stories from their parents and grandparents of their idyllic village lives and the Kalik games they played during their joyful childhoods. But for most of children's and young adults today, the games they have come to know are the single player ones on a bright screen and other games. Back in the day, Kalik games were creative – play out of pure imagination and items lying around – and children, as well as young adults alike, invented them to keep themselves entertained.

### **5.3 Originality of Kalik Game as Traditional Game in Timor-Leste**

In relation to originality of Kalik game as a traditional game in this country, 98.5 per cent respondents agree that Kalik game originally is from Timor-Leste. The main reason for this claim is first, from the time of their ancestor Kalik game was already exist and played; secondly, this game played from generation to generation over time; and lastly Kalik is growing well in most of the areas in Timor-Leste. In addition, some respondents pointed out they do not really know about the originality of Kalik. This is because since they were born this game was already played by communities in this area.

Kalik game is a game that played by children and young adults in schools, at home, in paddy field, at parties/ceremonies and in any places that favoured to be play. In some places (e.g., Cribas and Daisua) if there is a party or cultural ceremony, there will be participation of families who are invited. Those families who have children's or young adults they always brought Kalik bean in their purse or pockets. The purpose is for children's or young adults to play without interrupt the party/ceremony.

Playing Kalik game in Timor-Leste is unique. This is because the game can gather a number of people to play together as a group or as individual - one and one in a small flat land without any resources except Kalik bean. In addition, it is unique because there is no need for referee in the game as everything is based on the agreement between players before started the game. Thus, there is no limited time in playing such game – if the players feel boring or hungry then

the game will be stop. Indeed, at school there is time where students are allow playing during break time (around 30 minutes).

In relation to whether there is a formal competition of Kalik game in the past, most respondents described that there is no formal competition for kalik game at school and in other places. The main reason for this is because at that time there is no one has an initiative to formally introduce this game for formal competition. Kalik game actually is a community game where children's and young adults can play in their leisure time with the main objective of creating more friends, happiness, and enjoys the game.

#### **5.4 Cultural Significance of Kalik Game**

While History is the story of integration and disintegration of human aggregates, Culture has been the greatest integrating force in men (Munshi 1965). The first characteristic of the culture is continuity. It comes from the past, adjusts itself to the present and moves forward to shape the future.

In a primitive society like Timor-Leste (pre-colonial context) the use of the written form as means of communication is unlikely considered. Oral language/expression has been used as the instrument of communication process; words are directly linked to events, meeting and things that take place. Furthermore, the community that rich in oral tradition (legends, myths and stories) such as in Timor-Leste, there is an indication of the consciousness of an ancient community (Vincent, 2016)

Through the interview and FGDs with respondents it revealed that in some areas (e.g., Sanirin, Ponilala, and Venilale) talking about Kalik always link to culture (Uma Lulik) and therefore Kalik become a kind of product that anyone who come from Uma Lulic link to Kalik cannot discuss or talking about Kalik without permission from the elders or representative of that Uma Lulik. The reason is that it believes there will a consequence in terms of sickness or death for someone who discuss about Kalik without noticed to the elderly. However, this kind of permission do not have a relation with playing Kalik game; means anyone else can play Kalik at any time anywhere as they agreed to play. In addition, for those who not belong to that Uma Lulik they can discuss or talking about Kalik freely.

One of the very popular stories on Kalik told in this study, particularly in the municipality of Bobonaro, Ermera, and Baucau is the story of interpretation on the creation where heaven and earth are bound together by Kalik. According to tradition, people who were interviewed told that in long-gone days, earth and heaven are closed and connected by Kalik. One day an old woman went up to heaven to fetch fire; while in heaven she saw children playing 'hana osan mutin' (osan mutin is a kind of coin), and one of the osan mutins that was shot fell right near her feet. The old woman stepped on the osan mutin with her feet, so that the osan mutin would not be seen by the children (she plans to take that coin) because she took too long to get back to earth. This makes her husband angry, so he used a sword to cut the Kalik. Since that incident, heaven and earth separated and drifted away forever. According to oral tradition told by those interviewed in Atabae that Kalik to have risen in Gagaplau mountain of Atabae; while people in Sanirin and Ermera say that Kalik is raised in the village of Leimea leten, Atsabe from where

the old women claimed from earth to heaven. This specific results on the story about Kalik obtained in this research, is not much different compared to the study on oral tradition stories in Timor-Leste reported by Vincent (2016).

Additionally, there are *uma lisan (Clan)* in Venilale and Bucoli, in the district of Baucau named: **Luli Heni**, if it is translated laterally means **sacred or taboo kalik** (luli means: sacred and Heni means Kalik in local dialogue)

Furthermore, Kalik game in Timor-Leste is a kind of game that shows the representations, expressions, knowledge, skills and the object (Kalik) and cultural that associated with Timorese community or groups in the past - and in some cases individual and groups recognize as part of their cultural heritage.

### **5.5 The Main Purpose of Playing Kalik Game**

The result of the study shows that the main purpose of children's and young adults playing Kalik game is for a number of reasons including for happiness, to make more friends, learn how to count and also learn about languages, to entertain people, spend leisure time, and just for fun.

**To be happy** – There is around 40 per cent of respondents who describe that play Kalik game is just to be happy. This is because such game gathers a number of people from different background, ethnic, and culture. Wining and losses in the game is not really important; what is important is Kalik game brings people together as players and also spectators. Indeed, playing Kalik game makes them happy.

**Make more friends** - Through the game players will try to know each other. In some cases, the game can be played between different groups from different villages; in this case players didn't know each other before then. So, the game itself makes players/people to know each other and in the end all of them became friends and relatives. If all of them became friend then, there will be no any problems or confrontations that will happen between them in the community.

**Learn how to count and also language** – There are a number of respondents who claims that playing Kalik game not only for happiness or create more friends but also this kind of game teach players how to count basic numbers (e.g., 1,2,3...etc). This is because to decide who is the winner in the game, players need to count for a certain number as agreed. So at least the player knows how to count before involved in the game. This directly forces them to learn how to count. In some places players also learn some basic languages related to the game in particular Portuguese and Indonesian language.

**To entertain people** – Kalik game not only engage players but also spectators. Some respondents pointed out that the purpose of playing Kalik game is to show-up and play better as they can so that people can be entertained. This game is a kind entertainment game in particular for communities live in rural and remote areas. As in these areas lack of entertainment including sporting events, therefore Kalik game becomes an alternative for them to watch and get entertain.

**Leisure time** – This is particular for shepherd who looks after cows, goats and other livestock. As the livestock graze in an open field, shepherds are playing Kalik game with the aim they cannot get sleep. Shepherds always brought Kalik bean in their small bag so that when they meet with their counterpart they can play. In this case playing Kalik game sometimes involve betting such as cow milk, cassava, coconut and others.

**Just for fun** – Through the interview and FGDs it reveals that most of the respondents playing Kalik game just for fun. As children's and young adults at that time, the only game that most of them play is Kalik game. Respondents argued that there is no limitation regarding time and space in playing such game. So, play Kalik game just to enjoy and have fun.

## **5.6 Rules and Requirements in Playing Kalik Game**

Finding from this study shows that Kalik game turns out to be played in various ways. The game can be played individually and collectively as a group. Played individually can be up to 5 players; while in groups, the two groups or team that against each other must be with the same players. The player in each team can be between two to five players. The Kalik game generally performs to strengthen the friendship, school break, family or community gathering, and herding livestock.

Since the detailed rules of the Kalik game are never written and no information available on how it was evolved and changed over time, as well as the game, is no longer played in most territories of Timor-Leste. The following rules of Kalik games presented below are constructed mainly based on the information collected throughout the study. Consequently, the set of rules derived from this study might be not exactly accurate as the original version of Kalik game that was once played in the past. The following section provides the minimum requirements needed to perform the game, general rules and objectives associated with Kalik game, details of modality and its specific rules associated with it.

### **5.6.1 Minimum Requirement**

To be able to perform Kalik game, the minimums requirements need to be available are:

- ❖ Playing Field - Kalik game is played on a piece of flat area (no muddy, no grass, and no rocky on the surface). There is no limit to the area for the game to be played but the wider the better;
- ❖ Equipment - Kalik bean, the minimum number of Kalik bean needed is equal to the number of players.

### **5.6.2 General rules and objectives of Kalik game**

It is commonly agreed that Kalik game is a competition for accuracy in shooting or archery. The aim is to shoot/hit or throws down Kalik bean from the opponent to reach the agreed winning/championship/finish points that are decided before started the game.

### 5.6.3 Specific rules associated with Kalik game

#### 5.6.3.1 How to start Kalik game

1. The Kalik game begins by determining who will play first, and it can be decided in various ways:
  - a) Flip a Kalik bean (mark wet in one side and dry on another side of the Kalik) to decide who or which team plays first. Before flip of Kalik bean, the player/team chose the wet or dry sites. The sites that show up are the one that will play first.
  - b) Each player cast the Kalik game into the pit, who is nearest or enters the pit, will plays first, and follow by the second nearest, and so on;
2. Players that play first take a stand or position to shoot first, and the other players/team putting or locating their Kalik bean at the predetermined position;
3. If the first player succeeds in shooting/arching the opponent's fruit then he will continue to shoot. If it fails, then it will be replaced with the next player. This cycle continues until one player/team reaches the winning points;
4. End of the game - the game is finish when a player/team has reached the winning point agreed by the players or succeeded in shooting down all the opponent's Kalik beans.

#### 5.6.3.2 Scoring/point

Scoring or point in playing Kalik game occurs when the players/team members:

- ❖ Succeeded in shooting down/out/shoot the opponent's Kalik bean;
- ❖ Managed to throw the kalik bean into the pit/hole;
- ❖ The wining point ranging from 20 up to 100 points depending on the agreement made by players before started the game.

#### 5.6.3.3 Penalties

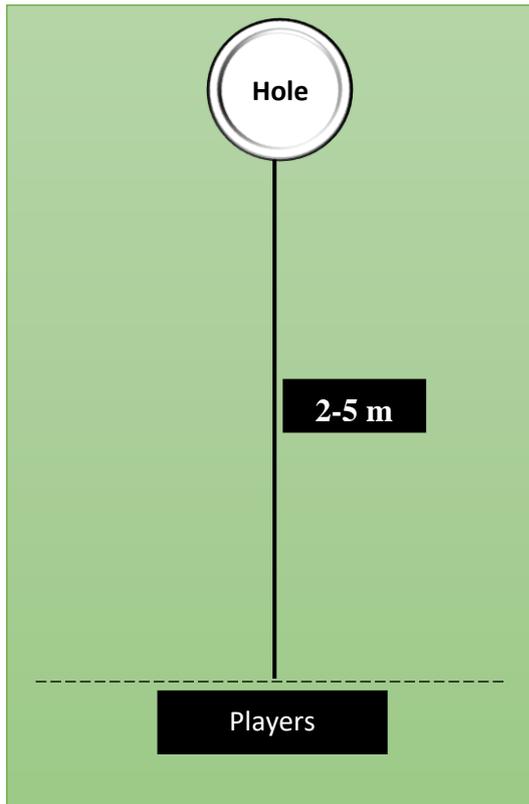
- ❖ The Kalik bean used for shooting or archery must not fall within one foot of the Kalik that is being shot;
- ❖ If there is collusion between two Kalik beans during the initial throw to determine who/which team plays first.

### 5.6.4 Modalities of Kalik game

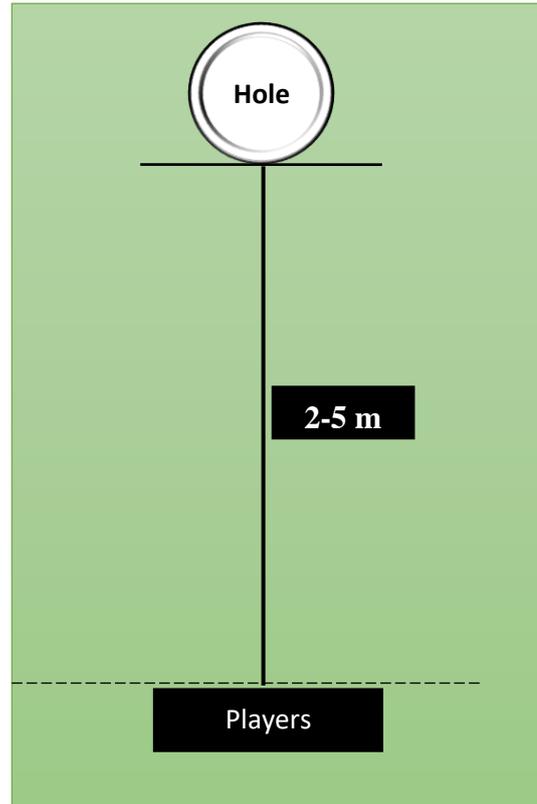
The result of the study shows that the modality of Kalik game can be categorized into five models. This includes 1) the hole model 2) The rectangular line model 3) The standing model 4) The Jot down model 5) The kneeling model. However, between those models, *the hole and standing models* are the two models most popular one being played in the past, and it is still played by children in village of Wairoke today. The following section provides details of these models.

### 5.6.4.1 The Hole Model

One of the most popular models of playing Kalik game in Timor-Leste is the Hole model. This model can be play by throwing Kalik to the hole. This is quite similar to the game of marbles. Technically, it can be played one on one or in pairs/groups. Each player holds one Kalik, then makes one hole in the middle and stands a line 2-5 meters away from the hole towards the player. The hole model has two types of game with slightly different of its playing field/design as shown in Figure 2a and 2b. In addition, the details of a specific rule, winning points, penalty, and determination of the winner for these two types are presented in the table 6.



*Figure 2a. Hole model line without line boundary closed to the hole*



*Figure 2b. Hole model line with line boundary closed to the hole*

Table 6. Specific rules for 'Hole model'

Stages	Play individual	Play group	Notes/remarks
<b>Started</b>	Throwing Kalik towards the hole (the one goes into/closer to the hole) play first	Throwing Kalik towards the hole (the team that managed Kalik goes into/closer to the hole) play first	To decide which player/team play first
	Collision between two Kalik	Collision between two Kalik	The players of the collated Kalik replay/re-throw the Kalik. To avoid the collision, after the throw, players just marked the location of where the Kalik is landed.
	Kalik that is throw do not pass the boundary line	Kalik that is throw do not pass the boundary line	The player/team is play last. This rule only applies to model (Figure 2b)
	Two Kalik enter the hole or have the same distance to the hole		Re-play/re-throw for the players that hold/own that kalik
<b>Play and point</b>	The first point is achieved by managed to throw the Kalik into the hole	The first point is achieved by managed to throw the Kalik into the hole	Before managing to make the first point, player not allowed to: - Shoot Kalik of the opponents - Make a step while throwing Kalik to the hole
	The second point onwards till the last point is achieved by throw the Kalik into the hole and shoot Kalik of the opponents	The second point onwards till the last point is achieved by throw the Kalik into the hole and shoot Kalik of the opponents	Every shoot gets one point. Every time player managed to get the Kalik into the hole gets one point
	The winning point is only achieved by shooting the Kalik of opponents	The winning point is only achieved by shooting the Kalik of opponents	
	Players managed to shoot Kalik of the opponents he/she continue to shoot until reaches the winning points (20-100)	Team member managed to shoot Kalik of the opponents, the team to shoot until reaches the winning points (20-100)	If he/she fails, then it will be replaced with the next player. This cycle continues until one player/team reaches the winning points.
<b>Penalty</b>	Kalik used for shooting or archery fall within one foot of the Kalik that is being shot	Kalik used for shooting or archery fall within one foot of the Kalik that is being shot	The measure of distance use both hands and feet
<b>Winning points</b>	Range between 20-100 (every win collects one victory). Player/team that collect more victory is the winner		

The player with the closes Kalik into or enters the hole is the first to play or to start the game, while the player who drops the Kalik with the farthest distance from the hole is the last to play. Then the first player starts throws/hana his/her Kalik, to the opponent's Kalik. One shoot

collects one point until it reaches the score that is set and agreed upon before starting the game (20-100 points). If the first player manages to shoot/throw another Kalik without misses until it reaches the agreed score, then the game is over, and he is the winner. However, if he misses once in his throw, he stops, and the second player continues the game and so on until the game is over.

#### 5.6.4.2 The Standing Model

The standing model of Kalik game can also be played individually (one on one up to five players) or collectively in groups. Each player holds one Kalik, and the first player/team to play first takes a stand behind the line, about 1-5 meters away from the first standing Kalik, and the opponents positioned their Kalik standing straight in the vertical direction to the players (see Figure 3). The details are follows.

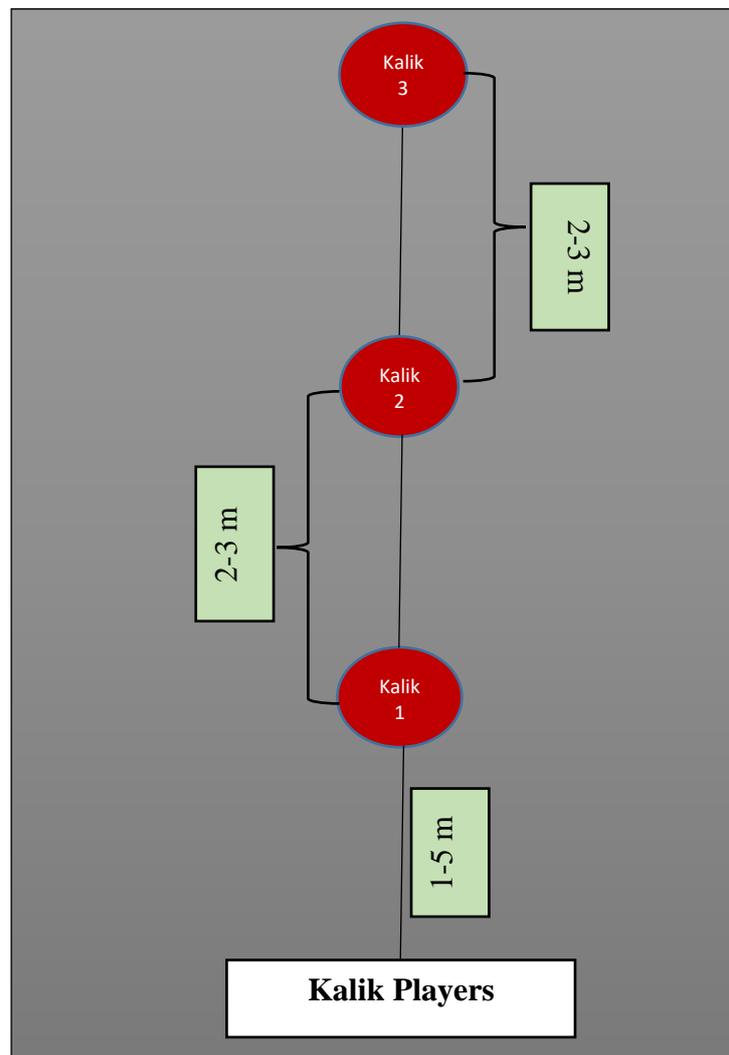


Figure3. Standing model of Kalik game

Table 7. Specific rules for standing model

Stages	Rules	Notes/remarks
<b>Started</b>	Flip the Kalik (marked wet and dry)	To decide which player/team play first
	The team that plays first take a position to throw the Kalik into opponent's Kalik	Team that plays second standing their Kalik in the predetermined position
	1 <sup>st</sup> players throw the Kalik targeted the farther Kalik of the opponents	The common strategy used: the 1 <sup>st</sup> and the 3 <sup>rd</sup> players normally the best player in the team, the 2 <sup>nd</sup> player is the average one.
	2 <sup>nd</sup> players throw the Kalik targeted the middle Kalik of the opponents	
3 <sup>rd</sup> players throw the Kalik targeted the closest Kalik of the opponents		
<b>Play and point</b>	1 <sup>st</sup> players start shoot the farther Kalik of the opponents, if succeeded then continue to shoot the middle one, and finally the closest Kalik of the opponents	The game is over, and the team get 1 victory if one player manages to shoot all 3 Kalik of opponents. The team continue to shoot in the second round
	If the 1 <sup>st</sup> player only manages to shoot one Kalik, and misses the second one, then it continues with the 2 <sup>nd</sup> , and the 3 <sup>rd</sup> players.	If the 2 <sup>nd</sup> and 3 <sup>rd</sup> player succeed to shoot the rest of opponents Kalik, the game is over. The team will continue to shoot in the second round; however, no victory is collected. To collect the victory one team member must managed to shoot all the Kalik from the opponents
	If the first team (1 <sup>st</sup> , 2 <sup>nd</sup> , and 3 <sup>rd</sup> ) players fail to shoot all Kalik from the opponents. The team stops, and the game is over.	The position of the first team (shooter team) is replaced by the second team. The game continues by the second team and repeated until the game is over.
<b>Penalty</b>	There is no penalty in this model of game	
<b>Winning points</b>	Team that collect more victory is the winner	

#### 5.6.4.3 Square Line Model

The Square line model of Kalik game can be played individually/singles and groups. This type of model played by two opposing teams. The objective for the players or team is to shoot or knock Kalik outside the square/rectangle line. The model of square/rectangle has two different types in which Kalik is standing - frontal and lateral, and shared the same rules (Figure 4) 3-5 Kalik are located/positioned inside the square with the distance of 30-50cm between Kalik. Detail rules of square/rectangle model are presented in Table 8.

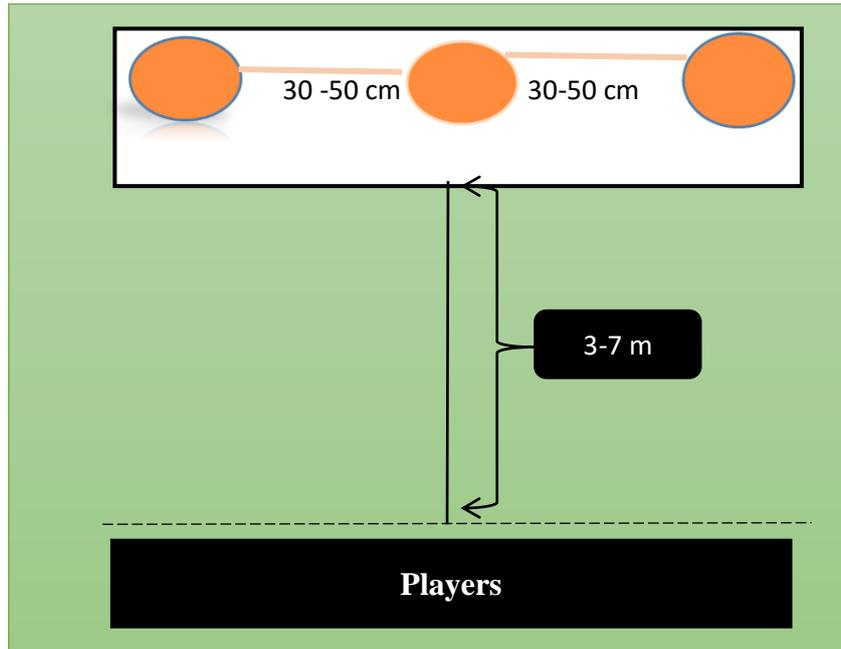


Figure4a. Square line model with Kalik position frontally towards player

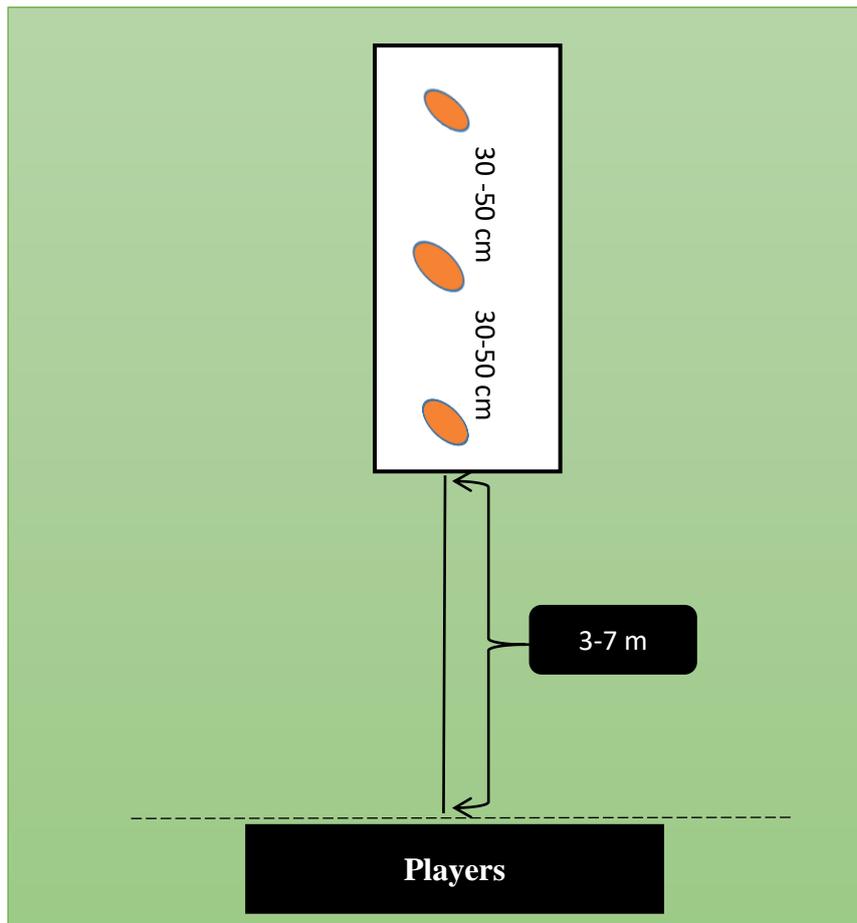


Figure 4b. Square line model with Kalik position laterally towards player

Table 8. Specific rules for Square line model

Stages	Rules	Notes/remarks
<b>Started</b>	Flip the Kalik (marked wet and dry)	To decide which player/team play first
	The team that plays first take a position to shoot Kalik of the opponent's that positioned inside the square	Team that plays second standing their Kalik inside the square
<b>Play and point</b>	1 <sup>st</sup> player/team start shoot the Kalik that positioned inside the square.	If succeeds to shoot all Kalik inside the square, then the game is over. The player/team collect one victory.
	If the 1 <sup>st</sup> player fails to shoot Kalik inside the square, he/she stops	The game continues by the 2 <sup>nd</sup> player, and so on, until the game is over
	In group - If the 1 <sup>st</sup> player only manages to shoot one Kalik, and misses the other two Kalik, then it continues with other team members.	If the 2 <sup>nd</sup> and 3 <sup>rd</sup> player succeed to shoot the rest of opponents Kalik, the game is over. The team will continue to shoot in the second round; however, no victory is collected. To collect the victory one team member must managed to shoot all the Kalik from the opponents
	If the player/team member (1 <sup>st</sup> , 2 <sup>nd</sup> , and 3 <sup>rd</sup> ) fail to shoot all Kalik from the opponents. The team stops, and the game is over.	The position of the first team (shooter team) is replaced by the second team. The game continues by the second team and repeated until the game is over.
<b>Penalty</b>	Kalik uses to shoot lands/falls inside the square	
<b>Winning points</b>	Team that collects more victory is the winner	

#### 5.6.4.3 Jot down model (apontador)

The jot down model of Kalik game is generally played singles. Two until five individuals opposing each other play it. The objective for the players is to shoot or knock the Kalik that positioned in predetermined position. To begin play the jot down model, flip of Kalik or the agreement between players to decide who play first and so on. The rule apply in jot down model is simple. Players take position behind the boundary line; the first player shoot the Kalik, if player manage to shoot or nock the Kalik, then he continues to shoot. If he fails to knock the Kalik, then it continues by second player and so on. The winning point is between 20 -50 depend on the agreement between players prior to the game started. Every 20 – 50 points collect one victory. Players that collect more victory are the winner at the end of the game.

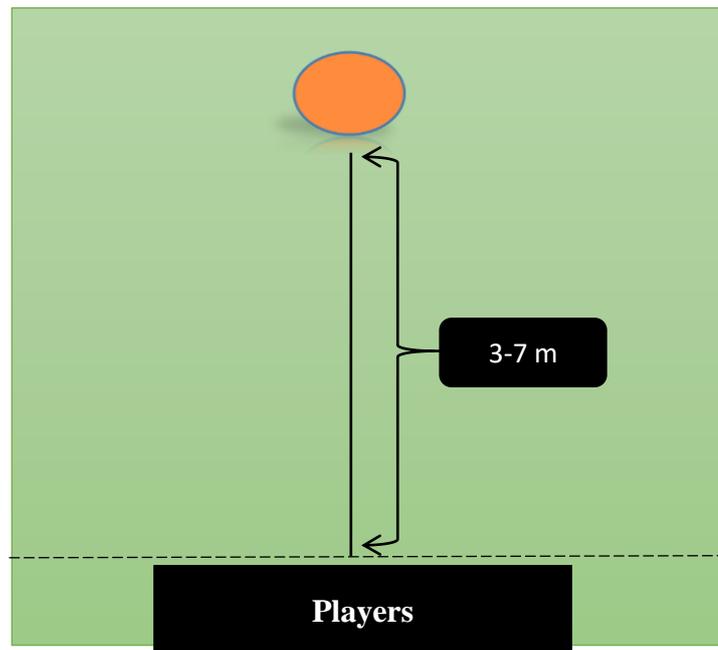


Figure 5. Jot down model

#### 5.6.4.3 Kneeling model

Kneeling model of Kalik game is generally played singles. It is played by two until five individuals opposing each other. The objective for the players is to shoot or knock the Kalik that positioned in predetermined position. To begin play the kneeling model, flip of Kalik or the agreement between players to decide who play first and so on. The rule apply kneeling model is the same as standing model. The only difference is that the position of player when shooting in a kneeling position.

Players take position behind the boundary line; the first player shoot the Kalik, if player manage to shoot or nock the Kalik, then he continues to shoot. If he fails to knock the Kalik, then it continues by second player and so on. The winning point is between 20 -50 depend on the agreement between players prior to the game started. Every 20 – 50 pints collect one victory. Players that collect more victory are the winner at the end of the game.

#### 5.6 How Kalik Game Evolve, Conserve and Transmitted Over Generation

The result of the study indicates that Kalik game has been practiced/played mainly among young people (7-17 years old) in the Bobonaro, Ermera, Manatuto, Manufahi, Baucau, Viqueque, and Lautem for generations throughout the history of Timor-Leste's society. The game of Hana Kalik, however, started to lose its popularity among young people during the Indonesian occupation (1976 – 1999). This traditional game is increasingly become unpopular or even extinct/disappear in most of Timor-Leste territory, after the country restored its independence in May 2002 onward. Some of the factors that contributed to the unpopularity of the game of 'Hana Kalik' in Timor-Leste, during the Indonesian occupation and post-independent is shown in table below.

Table 9. Factors contributed to the unpopularity of Kalik game in Timor-Leste

Factors contribute to the unpopularity of Kalik game	
Colonization / Invasion (Portuguese & Indonesian)	<ul style="list-style-type: none"> <li>✓ Community status segmentation</li> <li>✓ Forced displacement</li> <li>✓ The introduction of various toys and games during the Indonesian occupation</li> <li>✓ The game of 'Hana Kalik' was never part of School curriculum including school extracurricular activity during the colonization era</li> </ul>
Social Perspective	<ul style="list-style-type: none"> <li>▪ Lower class/poor family/uneducated game</li> <li>▪ Skipping class &amp; less study</li> <li>▪ Hygiene and health issue</li> <li>▪ Introduce the game of Hana Kalik to children can negatively influence children (skip class and play away from home);</li> <li>▪ Toy versus food</li> <li>▪ Sacredness</li> </ul>
Modernization & advance technology	The influence of modern technology such as Mobile phone - children can easily access to online games/YouTube & Facebook, etc.
Natural Conservation	Forest clearance; Reduction of Kalik population; Low public awareness and Weak low enforcement
Government	Lack of attention and interest; School curriculum; Community sport; and the reluctance of the government especially the Ministry of Education and the Secretary of State for Youth and Sport to conserve this traditional sport
Sustainability aspect	Young generation in most of the territories do not know how to play the game of Hana Kalik, as there was no exemplar from their parents/previous generation, neighbor, or surrounding areas
Personal aspect	Lack of interest; Unmotivated (no betting); and There was a stigma that playing Hana Kalik at the age of adulthood is associated with laziness.

The above components in Table 9 were repeatedly mentioned by the respondents and participants of FGD as the contributing factors to the unpopularity and the extinction of the game of Hana kalik in Timor-Leste. The interesting finding of this study is that the game of Hana Kalik is not just a game, but it is connected to various aspects of the life of the community. Some of the examples are presented in the following sections.

**The connection of Hana Kalik to the aspect of natural forest conservation** - Kalik offered and sustained by the nature freely that children/people can use to play Hana Kalik. The people of Timor-Leste can maintain and pass on the originality of this traditional game to the current

and future generations if the natural forest is protected. One of the interviewees from Atabae, Bobonaro, points out:

*“The original game of Hana Kalik will be lost forever if our people (Timorese) do not conserve the natural forest and stop clearing up our forest, it is difficult to find Kalik nowadays” (Vicente Xavier – retired civil servant)*

**The connection of Hana Kalik to the history of colonialization and invasion in Timor-Leste** - In the colonialization era of the Portuguese in Timor-Leste, the game of Hana Kalik was a symbol of community segmentation ‘children from upper-class family vs lower class’. Children from the upper-class families/ community do not play Hana Kalik. The game of Hana Kalik is considered a game for lower/poor/uneducated family. This thought is still attached to some people today, which contribute to the unpopularity of Hana Kalik in Timor-Leste as revealed in the FGD as follows:

*‘Teach our children to play Hana Kalik in this modern era is not seems right; education is a central focus for the children and play the game of Hana Kalik is associated with poor and uneducated families’ (FGD - Viqueque)*

The unpopularity of Hana Kalik in Timor-Leste has also connected with the history of the invasion of Indonesia to Timor-Leste. As narrated by the participants of FGD in Viqueque

*‘We the community in Bibileo was forced by the Indonesian military to relocate to this area (low land area) after Levantamentu Kraras. In our original village Hana Kalik was a popular game because there were plenty of Kalik to can be found’ (FGD - Viqueque)*

Another very popular piece of information told during the interview was, the introduction of various toys and games during the Indonesian occupation contribute significantly to the unpopularity of Hana Kalik.

Throughout the study, it is identified that Kalik game still entertains today by the children’s; boys and girls, young adults; men and women, and even the elderly in one of a very remote village named Wairoke, sub administrative of Luro, municipality of Lautem. This is the only village where Kalik game still performs out of the 7 municipalities, 14 sub administrative, and 35 villages. The main reason identified for this particular community to keep this traditional game alive is because this remote community is quite isolated from the outsider. Elderly/parents in the village of Wairoke pointed out the important reasons to preserve the game of Kalik for their children as described in Table below.

Table 10. *Main reason for keeping Kalik game alive in Wairoke - Luro*

Tradition & History	Economic	Forest Conservation	Geography
<ul style="list-style-type: none"> <li>▪ Timorese owned game</li> <li>▪ Played &amp; conserved &amp; transmitted over generation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Zero cost</li> <li>▪ Minimize cost associated with buying toys</li> </ul>	<ul style="list-style-type: none"> <li>▪ Free and easy access</li> <li>▪ Natural Protection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Remote and mountainous</li> </ul>

The four important components; tradition and history, economic, forest conservation, and the geographical area, highlighted by the respondents and the participants of FGD in suco Wairoke, Lautem is a fundamental reason why the game of Hana Kalik still performs and will be conserved for the future generation. Below are some of the words compiled from the observation and conversation with the people in Wairoke.

- In Wairoke the game of Hana Kalik is played by all ages (children, adults, and elderly) and involved males and females. The enthusiasm of the community is clearly express while playing Hana Kalik; Second,
- In one encounter by the research team with one lady (grandmother) in Wairoke, the grandmother heads back inside her house and brought out a green handbag half full of Kalik bean. A member of the research team asked, why do you keep the Kalik bean? She replies:

*I keep it for my grandchildren so they can use it for playing Hana Kalik or just as toys*

The research team follows up with another question. Why do you want your grandchildren to play with Kalik? She answers:

*It is free offered by forest, it cost me nothing and I can just go to the mountain and collect the Kalik beans as many as I want. Buy toys for my grandchildren is expensive and I do not have enough money. Buy toys is wasting of money and time, they are not last long and to buy toys we must travel to town/market which is a very long distance and no transportation (Fernanda Marques – Wairoke)*

- Other information obtained during the conversation with the community in Wairoke is related to the importance of conserving the game of Hana Kalik. The game is considered as part of the tradition of the community, which has been played/practiced and pass on for generations. Hana Kalik is not seen just as a game but it is part of the tradition and history of their ancestors.

Although Kalik game was popular in the past, this traditional game was never incorporated into the school curriculum in Portuguese time, Indonesian occupation until today where Timor-Leste become an independent country. Because of this there is no definitive account of the rules for the Kalik game is known.

## VI. CONCLUSION AND RECOMMENDATION

### 6.1 Conclusion

There are various traditional games played by children and young adults in the past however, some of these traditional games are still exists but some are not existing anymore. With the development of digital technologies traditional games that were once very popular in Timor-Leste's society such as Kalik game now is increasingly become unpopular or even extinct/disappear in most of Timor-Leste territory.

Based on the results of the study it can be concluded that Kalik game is a traditional game for Timor-Leste society. Most of the stakeholders interviewed claimed that this game *originally is from Timor-Leste*. The main reason for this claim is because from the time of their ancestor Kalik game was already exist and played and also this game played from generation to generation over time.

The game can be *played individually and collectively* as a group. Played individually can be up to five players; whiles in groups, the two groups that against each other must be with the same players. The *minimum requirements* to play Kalik game is a piece of flat area with no muddy, no grass, and no rocky on the surface; and the Kalik bean itself. In addition, the *general rules* in playing Kalik game is that the game itself is a competition for accuracy in shooting or archery with the aim of shooting/throwing down Kalik bean from the opponent to reach the agreed winning points.

The result of the study reveals that there are *five types/models of playing Kalik game* which includes the hole model; the rectangular line model; the standing model; the jot down model; and the kneeling model. In addition, between these models, the hole model and the standing model are the most popular and being played in the past until present time (in Wairoke).

The majority of stakeholders describe that *Kalik game first time introduced by Timorese ancestors* long time ago before the Portuguese arrival. This game rooted in Timor-Leste however, there is no clear date regarding when and where Kalik game was first introduce and play. By the time this game was transmitted over the generation and Kalik game mostly played during Portuguese time and by then it slowly disappeared as Indonesia invade Timor-Leste.

Kalik game in Timor-Leste is a kind of game that shows the representations, expressions, knowledge, skills and the object (Kalik) and cultural that associated with Timorese community or groups - and in some cases *individual and groups recognize as part of their cultural heritage*. In addition, in some municipalities, there is also a story of interpretation on the creation where heaven and earth are bound together by Kalik. Additionally, there are uma lisan (Clan) in Venilale and Bucoli, named 'Luli Heni' (sacred or taboo Kalik).

There are a number of reasons why children's and young adults playing Kalik game. This includes playing Kalik game for happiness, to make more friends, to learn how to count and also learn about languages, to entertain people, spend leisure time, and just for fun.

This study found that Kalik game has been played mainly among young people for generations. The game of Hana Kalik, however, started to lose its popularity among young people during

the Indonesian time and it is increasingly become unpopular or even extinct in this country. Factors contributed to this includes the introduction of various games during the Indonesian time; the game of 'Hana Kalik' was never part of school curriculum during the colonization era and after the independence; the influence of modern technology such as mobile phone; and most of young generation do not know how to play the game, as there was no exemplar from their parents/previous generation, or surrounding areas; and so on.

## **6.1 Recommendation**

The result of the study clearly demonstrates that Kalik game originally from Timor-Leste and it was played from generation to generation. From the point of view of history and culture, Kalik game is rooted in this country. However, by the time this type of traditional game become unpopular or even extinct from Timor-Leste. To avoid further extinction of this traditional game and make it alive for present and future generation, it is recommended:

- ❖ It is important to introduce Kalik game in schools as part of the curriculum – extracurricular activities. This is in line with the strategies of the national policy on Traditional Sport which is to introduce knowledge of traditional sport through the curriculum of physical education and sport, for all levels of the education;
- ❖ It is important to have a formal competition regularly for Kalik game at school or community in general in the national and municipality level.
- ❖ Registration to UNESCO is needed so that internationally it can be recognized as one of the heritages of Timor-Leste;
- ❖ For relevant institutions to actively promote Kalik game as a traditional game to younger generation so that they can feel ownership of the game. This can be done through regular competition, seminars, workshops, and so on;
- ❖ As there is a number of different models of Kalik game with different rules, therefore it is important to deeply analyse so that it can produce one or two general rules that can be apply for Kalik game and used it for competitions nationally;
- ❖ To avoid the extinctions of Kalik plant due to human interventions or climate change cooperation between relevant institutions is needed;
- ❖ Further study is needed to find out more information regarding this type of game in particular in other remote villages in Lautem to examine the possibilities of Kalik game if still perform to this day.

## REFERENCE

- Bosh, C.H. 2011, *Plant resources of Tropical Africa*, Wageningen, Netherlands
- Blair, E. 2015, *A reflexive exploration of two qualitative data coding techniques*, Journal of Methods and Measurement in the Social Sciences, 6(1), 14-29.
- Cribb, A.B. & J.W. Cribb. 1982, *Useful Wild Plants in Australia*, Fontana/Collins, Sydney, Australia
- Caillois, R. 2001, *Man, play and games*, University of Illinois Press, Illinois
- Erskine, W., Xoimenes, A., Glazebrook, D., Da Costa, M., Lopes, M., Spyckerelle, L. and Williams, R. 2015, *The role of wild foods in food security: the example of Timor-Leste, The Science, Sociology and Economics of Food Production and Access to Food*, Springer, ISSN 1876-4517 Volume 7 Number 1
- Gunn, C.R., Dennis, J.V. and Paradine, P.J. 1976, *World Guide to Tropical Seeds and Fruits, Quadrangle* Times book Co, New York, USA
- Huizinga, J. 2010, *Homo ludens*, Alianza, Madrid, Spain
- Jornal da Republica, 2017, *Resolucao do Governo No 48/2017, 16 de Agosto – sobre Politica Nacional Para o Desenvolvimento do Disporto*, Serie I, No 32, p.1484, Dili, Timor-Leste
- Ley, 2019, *Actividad física y el deporte de Canarias*, 30 de Jenero de 2019, Canarias
- Luta Hamutuk, 2015, *Promove jogu tradisional hodi defende Timor-Leste iha Futuru*, Secretariadu Estadu Juventude no Disportu, Dili
- Parlebas, P. 2001, *Juegos, deportes y sociedad, Léxico de praxiología motriz*, Contribution to an Annotated Vocabulary on the Science of Motor Action, Paidotribo, Barcelona
- Paulino, V. 2016, *Writing and translating Timorese oral tradition*, Configuracoes (online), <http://journals.openedition.org/10.4000/configuracoes.3284>
- Strauss, A. L. 1998, *Basics of qualitative research: techniques and procedures for developing grounded theory* (2nd ed. ed.), Thousand Oaks, Sage Publications.
- Sutton-Smith, B. 2001, *The ambiguity of play*, Harvard University Press, Cambridge
- UNESCO, 2017, *UNESCO Advances, The 2030 Agenda for Sustainable Development*, París:
- UNESCO, 2003, *Convention for the safeguarding of the intangible cultural heritage*, Available online at: <https://ich.unesco.org/doc/src/01852-EN.pdf>
- <https://pfaf.org/user/Plant.aspx?LatinName=Entada+phaseoloides> - Accessed 20 May 2021
- [http://en.hortipedia.com/wiki/Entada\\_phaseoloides](http://en.hortipedia.com/wiki/Entada_phaseoloides) - Accessed 22 May 2021
- <https://www.wikidata.org/wiki/Q3281753> - Accessed 02 June 2021

## APPENDIXES

### *Appendix 1. List of stakeholders consulted*

No	Name	Title / position	Municipio/ Posto Administrativo
1	Santana M. Antonio	School Director	Atabae
2	Joao Leto Domingos	Lia Na'in	Balibo
3	Eurico T. Pirez	Teacher	Atabae
4	Vitor dos Santos	School Director	Balibo
5	Bendito Salsinha	Civil servant	Ermera Vila
6	Adelino Maia	Private Sector	Ermera Vila
7	Cornelio A. Martins	Teacher	Ermera Vila
8	Tomas das Neves	Lia Na'in	Ermera Vila
9	Constantino Exposto	Director of MAE	Ermera
10	Mateus C. Cabral	Head of village	Barique
11	Anibal Soares	Chefe Juventude	Manatuto Vila
12	Manuel da Silva	Teacher	Manatuto Vila
13	Pedro Gusmao	Heah of sub-village	Manatuto Vila
14	Domingos Soares	Private Sector	Manatuto Vila
15	Helino B. Pereira	Interim Rector	Private Univ-Same
16	Rafael Filiciano	Civil servant	Same Vila
17	Jose Pinto	Teacher	Viqueque Vila
18	Domingos S. Oliveira	Trader	Viqueque Vila
20	Domingos Savio	Administrador Municipio	Municipio Lautem
21	Andre de Sa	Lia Na'in	Vemasse
22	Fernanda Ximenes	Dona da Casa	Venilale
23	Antonio Pinto	Administrador Posto	Viqueque Vila
24	Januario Soares	Administrador Municipio	Viqueque

*Appendix 2. Photo's activities*



FGD in Atabae - Bobonaro



Interview with School Director - Sanirin



Meeting with Administrador municipio Lautem



FGD in Malerek Mutin - Viqueque



Childrens & adults play Kalik game in Wairoke



Practice Kalik game - Viqueque



Interview with elderly people - Manatuto



FGD - Cribas



FGD Ponilala - Ermera



Interview with Chefe Aldeia - Railaco



FGD in Clacuc - Same



Kalik tree - Fatuberlihu, Same