འབྲུག་གི་ནང་འགོད་རྒྱ་ཆག་སྐུངས་བཟོ་ནེའི་བྱ་རིམ་གནས་ཚུལ།

BHUTAN STANDARD

Process of Traditional Thangka/Kuthang Making

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འབྲུག་གི་ནང་འཕོད་རྭོ་ཚག་སྐུངས་བཟོ་ནིའི་བྱ་རིམ་གནས་ཚུལ།

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FOREWORD

This Bhutan Standard for process of traditional thangka/kuthang making was drafted by Sub-Committee on thangka/kuthang SC 02 and adopted by Bhutan Standards Bureau after the draft finalized by the Textile and Handicraft Technical Committee TC 06 and approved by the Bhutan Standards Bureau Board (BSB Board) in July 2023.

This standard is subject to systematic review after five years to keep pace with the market trends, industrial and technological developments. Any suggestions and further information may be directed to the concerned Technical Committee.

འབྲུག་གི་ནང་འགོད་རྭོ་ཚག་སྐུ་དཔར་བཟོ་ནིའི་བྱ་རིམ་གནས་ཚུལ།

Process of traditional thangka/kuthang making

1 Introduction

Zorig chusum ཟོར་རིག་བཅུ་གསུམ་ was established in the 8th century and refined during the 17th century. It incorporates Thangka as part of the thirteen arts and crafts, which is based on the ten sciences of Buddhist studies.

The *Thangka* ཐང་ཀ་/*Kuthang* སྐུ་ཐང་ painting is an age-old tradition that requires a certain set of skills. While the painting is done exclusively by hand, it involves painting intricate and colourful images of Buddhist deities onto a canvas or silk using natural pigments and precise brushwork, followed by attaching a *THAN-jah*.

Thangkas play a crucial role in Bhutanese culture as they are used for meditation, prayer, and decoration in homes and monasteries. The art has been passed down through generations and is still widely practiced in Bhutan today.

This document provides guideline on traditional *thangka/kuthang* making.

2 Scope

This standard specifies the process of traditional thangka ཐང་ཀ་/Kuthang སྐུ་ཐང་ making (Painting and THAN-jah མཐན་འཇའ་ stitching).

3 Normative References

No normative references are cited.

4 Terms and Definition

For the purpose of this standard, the following definitions shall apply.

4.1. Kuthang སྐུ་ཐང་/Thangka ཐང་ཀ་ /Zhelthang ཞལ་ཐང་

Refers to traditional forms of art in Bhutan that involve intricate paintings carefully stitched onto a fabric backing using a traditional Bhutanese sewing technique. Ku·སྐུ་ is a respectful term that usually refers to the images of Bodhisattvas. Depending on the type of thangka ཐང་ཀ་, it can be referred to as a "thangka ཐང་ཀ་, Kuthang སྐུ་ཐང་, or Zhelthang ཞལ་ཐང་

4.2. THAN-jah མཐན་འཇའ་

Fabrics mounted to mā-loong.

4.3. Tsakpar ཚག་པར།

Refers to a master copy (དཔེ་རི་) used for transferring an art or design (རི་མོ) onto a canvas or cloth using the prick and pounce technique. This technique involves drawing, pricking, pouncing, and tracing on the canvas/cloth. The masterpiece is also commonly referred to as a Tsakpar.

4.4. Mā-loong སྨན་གཙང་།

Refers to a painted canvas or scroll. This canvas is typically painted or embroidered, and the size and shape of the mā-loong can vary depending on the intended purpose of the thangka.

4.5. Nagthang ནག་ཐང་།

Refers to paintings that are painted with a black-base and highlighted with gold, silver, etc.

4.6. Serthang གསེར་ཐང་།

Refers to a type of thangka ཐང་ཀ། painting that features a base layer of gold paint, with intricate details highlighted using various colours such as brown, black, and indigo, etc.

4.7. Tsoen-thang) མཚོན་ཐང་།

Refers to a thangka ཐང་ཀ། painted with multiple colours. It is also known as Tsoe-thra chem <མཚོན་ཁྲ་ཅན་མ>).

4.8. Tshay-thang ཚོད་ཐང་།

Is a type of thangka ཐང་ཀ། with a red base colour.

4.9. Ngoe-thang· དངོས་ཐང་།

Is a thangka ཐང་ཀ། with a silver base colour

4.10. Kam-dhang སྐམ་མདངས།

Is a painting technique that involves using colour to create different shades using water

4.11. Sher-thang ཤེར་ཐང་།

It is a painting techinque for creating layers of short lines to create various colour shades using a thin brush.

4.12. Durm-dhang གྲུམ་མདངས།

It is a painting technique used to create shades with layers of strokes of paint.

4.13. Loem-dhang སྦྱོམ་མདངས།

Loem-dhang is a painting technique that involves using different shades of a single colour by adding white colour to the base colour depending on the requirement of a shading effect. The technique is commonly used in Thangka painting and is particularly effective for creating depth and dimension in a composition.

4.14. Do- tshoen རྡོ་མཚོན།

The Pigment extracted from stone.

4.15. Sa -tshoen ས་མཚོན།

The Pigment extracted from soil.

4.16. Zang- tshoen ཟང་མཚོན།

The Pigment extracted from vegetables like onion.

4.17. Shing- tshoen ཤིང་མཚོན།

The Pigment extracted from leaves and stem.

4.18. Acrylic paint

The imported pigment used for painting.

4.19. Kara/Sakara ས་ཀ་རེ།

The white colour used for painting

4.20. Ku སྐུ།

The statue placed at the mā-loong.

4.21. Thrue-ki ཁྲུའི་སྐུད།

Refers to a thread used for creating cord (border lines). A white thread is used for the inner cord and a red thread used for the outer cord.

4.22. Dong གདོང་།

A rectangular piece of silk or brocade at the lower part of a THAN-jah ཐའམ་བཅན་འཛིའ། that is considered a symbolic "door" of the thangka ཐང་ཀ།.

4.23. Churido ཆུ་འདུས་རྡོ།

The smooth stone from the river used for rubbing to make the surface of the canvas smooth.

4.24. Thik-shing ཐིག་ཤིང་།

Refers to an instrument used for measuring dimensions/sizes to make a thangka.

4.25. Kha-sha (ཁ་ཤ)

The cotton cloth (canvas) used for making of thangka.

4.26. Kow-chin ཀོ་ཕྱི་སྦྱིན།

Animal glue.

4.27. Top Dowel སྟག་ཤིང་།

The wooden ade stick used for hanging of thangka /Kuthang.

4.28. Bottom Dowel སྨད་པ་ཤིང་།

The wooden stick bigger than Top Dowel used for proper shaping of the thangka.

4.29. Tog རྟོག།

Decorative knob fixed at the edge of the Bottom Dowel.

4.30. Dhachu

The process of smoothening the canvas using a pebble.

4.31. Sum-dhang ཟུམ་མདངས།

Creating a colour shade with three distinctive layers from the same colour shade, and the painting technique is basically used for traditional Bhutanese house and furniture.

4.32. Lopen སློབ་དཔོན།

Framing square (L-shaped square used)

4.33. Thi-kue ཐིག་སྐུད། **/Tshem-Thi** ཚེམས་ཐིག།

Is a thread marker (a tool) used in Bhutanese traditional art to create lines by coating a thread with natural pigment or colour. The thread is first wrapped in a pouch made of cloth or leather, and tightened (or stitched) at the edges. To mark a line, the thread is pulled from either side to coat with pigment, then with the two edges of the thread held tightly it is snapped against the canvas to make lines onto the surface.

4.34. Jyal- thaa རྒྱལ་ཐག།

A string used for measuring the dimensions. The artisans now use measuring tape for the same purpose.

4.35. Soe-ri སྲེད་རི།

Charcoal used for drawing Rimo

4.36. Rimo·རི་མ)

Refers to line drawing (initial sketch or outline drawn onto a canvas or other painting surface).

4.37. Zang-zhong ཟང་སྲོང་།

The bowl used for making kara

4.38. Nyom-tse ta-chey སྙོམ་ཚད་བཟོ་ཆས།

A wooden divider used to check proportion/or if the figure is symmetrical.

4.39. Tshoen-phop ཚོན་ཕོབ་/Sa-phob ས་ཕོབ་

A container used for mixing and storing colours during painting.

4.40. Pha- ze ཕག་རྩེ་

Is a brush made from pig bristles

4.41. Dhang Cheeri མདངས་སྤྱི་རི་

A special flat brush used for shading on the canvas.

4.42. Ju-cheeri ཇུ་སྤྱི་རི་

A brush made from cow's ear hair used for fine painting.

4.43. Chay-cheeri ཇྱག་སྤྱི་རི་

A brush made from soft animal hair such as cat, cow, etc. for making fine edge lines.

4.44. Thang-drom ཐང་སྒྲོམ་/Ray-shing རི་ཤིང་

A frame used for stretching/holding canvas.

4.45. Ta- khaab ཏ་ཁབ་

A tufting needle

4.46. Tuel-shing སྟུལ་ཤིང་

A pestle used for mixing the colour.

4.47. Sen-chu སེན་ཆུ་

Is a bronze hook nailed on the Gu-shing to attach cord for hanging thangka.

4.48. Goeri གོས་རི་ -

Is a decorative pattern that is commonly used on a dress རྟེན་རྩེ་ of Lhatsho to represent silk brocade. This technique allows the artist to create a richly textured and detailed representation of

the brocade fabric in a painting. The pattern may be made from colour, silver, bronze/pure gold ཤེར་དེ།, depending on the desired aesthetic and affordability.

4.49. Seri ཤེར་དེ།

Is a decorative pattern that is made from gold on a dress རན་ཟེ། of Lhatsho to represent silk brocade.

4.50. Chay ཕྱེད།

Is a tapered line made around the edges of the painted images using a fine brush.

4.51. Lhatsho ལྷ་ཚོགས།

It is assembly of god/deity.

4.52. Chen-Zhay· ཕྱེད་ཁའི།

Is a respectful term for eyes and mouth.

4.53. Jaa-dri-Mar-ser ཇ་འཛད་སྨིག་དམར་སེར།

Refers to a red and yellow border (frame) that surrounds the mā-loong.

4.54. Zhay-chen

The final stage/process in traditional art of painting

5 Raw materials

5.1 Mā-loong/ Canvas

Kha-sha (Canvas), Kow-chin (Animal glue), Sakara

5.2 Paint

Do – tshoen, Sa – tshoen, Zang – tshoen, Shing - tshoen , acrylic paint, gold, silver, bronze

5.3 THAN-jah

Fabric: (Silk, raw silk, cotton, polyester/acrylic), Sewing thread (acrylic), Thrue-ki (Silk/wool),Gu-shing, Ju-shing, Tog (Knob)- (Silver/Gold/Bronze/Wood), Metal hook (Bronze/Leather)

6 Production process of Thangka/Kuthang

a) **Stretching:** Stretch the canvas onto the *Ray-shing.*
b) **Priming:** Apply *kara* on the canvas and let it dry.
c) **Burnishing:** Smoothen the surface of canvas using a smooth stone *(churi-dho).* The canvas must be placed on a flat wood called *Dhachu Enta.* This entire process is called *Dhachu*. Quality of the canvas should be smooth and even, so paint and water will not run-off or form beading on the surface.
d) **Sketching:** Sketch on the canvas (or paper). Refer Annex C
e) **Painting:** Paint on the prepared canvas.Refer Annex D
f) **Mounting**: Mount the finished canvas using *THAN-jah*. Refer Annex E

7 Types of Thangka/Kuthang

There are different types of *thangka/Kuthang* paintings that are created using specific base colours.

7.1 Nagthang: The *Nagthang* is a type of *thangka* with a black base colour. The black colour forms the backdrop against the main image or icon, which is highlighted with gold and/or a few colours.

7.2 Tshaythang: The *Tshaythang* is a type of *thangka* with a red base colour. The red colour forms the backdrop against the main image or icon, which is highlighted with gold and/or a few colours.

7.3 Serthang: The *Serthang* is a *thangka* with a gold base colour. The gold colour forms the backdrop against the main image or icon, which is highlighted with a few colours.

7.4 Ngoethang: The *Ngoethang* is a *thangka* with a silver base colour. The silver colour forms the backdrop against the main image or icon, which is highlighted with black, brown, indigo, and/or a few colours.

7.5 Tshoenthang: The *Tshoenthang* is a *thangka* with multiple colours and is one of the oldest and traditional practices applied to a *Kuthang*, requiring a variety of techniques such as *Loem-dhang, Kam-dhang, Durm-dhang*, and *Sher-dhang*.

8 Techniques and methods of painting

8.1 Loem-dhang: Involves the use of multiple shades of the same colour to create varying depth and dimension in the painting. There are two types of *Loem-dhang* techniques: *Lhaydhang* and *Sumdhang*. While *Sumdhang* is typically used for other types of paintings, *Lhaydhang* is the preferred method for thangka painting.

8.2 Kamdhang: Refers to dry shading. It is a painting technique that involves using colour to create different shades with the help of water. *Kamdhang* techniques have three types:

a. **Chudhang:** (Chu refers to water; Dhang refers to creating colour shade using water). *Chudhang* uses one colour to create different shades using water.
b. **Sherdhang:** (Sher- refers to lines created by using a thin brush; Dhang refers to a colour shade created by making layers of lines). It is a painting techinque for creating layers of short lines to create shades using a thin brush.
c. **Durmdhang:** (Durm refers to strokes (dots) made with a soft brush out of paint; Dhang refers to shade). It is a painting technique used to create shades with layers of strokes of paint.

Note: *The techniques and methods used for finishing Kamdhang paintings are similar to those used in Loemdhang paintings. Therefore, comparable finishing techniques can be applied to both types of artwork.*

9 Quality Control

(i) Preparatory stage: The first stage of quality control involves ensuring that the raw materials meet the required specifications and are of the appropriate size and material quality for the intended use. This includes checking that the paints are made of pure gold, pure natural pigments, or chemical colour paints, as needed. Additionally, there should be a process to test the ratio of materials to ensure that the colours are mixed correctly and produce the desired shade.

(ii) Painting stage: Quality control during the painting stage involves monitoring various stages of the painting process to ensure that the final product meets the desired quality standards. Proper colour shading, *chay,* and *Zhay-chen* techniques are important aspects of this stage, as they determine the overall quality of the painting. The paint application, brush strokes, and the duration set for drying should also be monitored to ensure consistency and uniformity in the final product.

(iii) Painting finishing stage: This stage is critical to ensuring that the final product is of high quality and meets the desired specifications. Any necessary touch-ups or adjustments should be made before the painting is finalized and ready for display or sale.

(iv) THAN-jah stitching stage: When stitching the *THAN-jah,* make sure to attach the *mā-loong* at the end to prevent any tears or damage during the stitching process.

10 Storage and packaging

10.1 Mā-loong: When rolling the *mā-loong,* use a thin and soft cloth or handmade paper to wrap the painting. This will prevent scratches or damage to the paint.

10.2 Thangka rolling: Before rolling the thangka, make sure that the *Zhaykheeb* is spread evenly and flatly to avoid any creases or folds that could damage the painting.

10.3 Thangka Storage: Store thangka in a clean, dry place with moderate temperature and humidity levels to prevent damage from moisture or pests.

10.4 Thangka packaging: To protect the thangka during transportation or shipping, use a sturdy and protective tube, such as a PVC pipe. Make sure to label the tube with any other relevant information.

11 Tools and Equipment

i. Lopen
ii. Jyal- thaa
iii. Zang-zhong
iv. Tsoen - phog
v. Pha-ze
vi. Dhang Chiri
vii. Ju- cheri
viii. Chay- chiri
ix. Thik-shee
x. Churi-do
xi. Thang-drom
xii. Ta- khaab
xiii. Tuel-shing
xiv. Scissors
xv. Knife
xvi. Saw
xvii. Pots
xviii. Thread
xix. Wooden divider

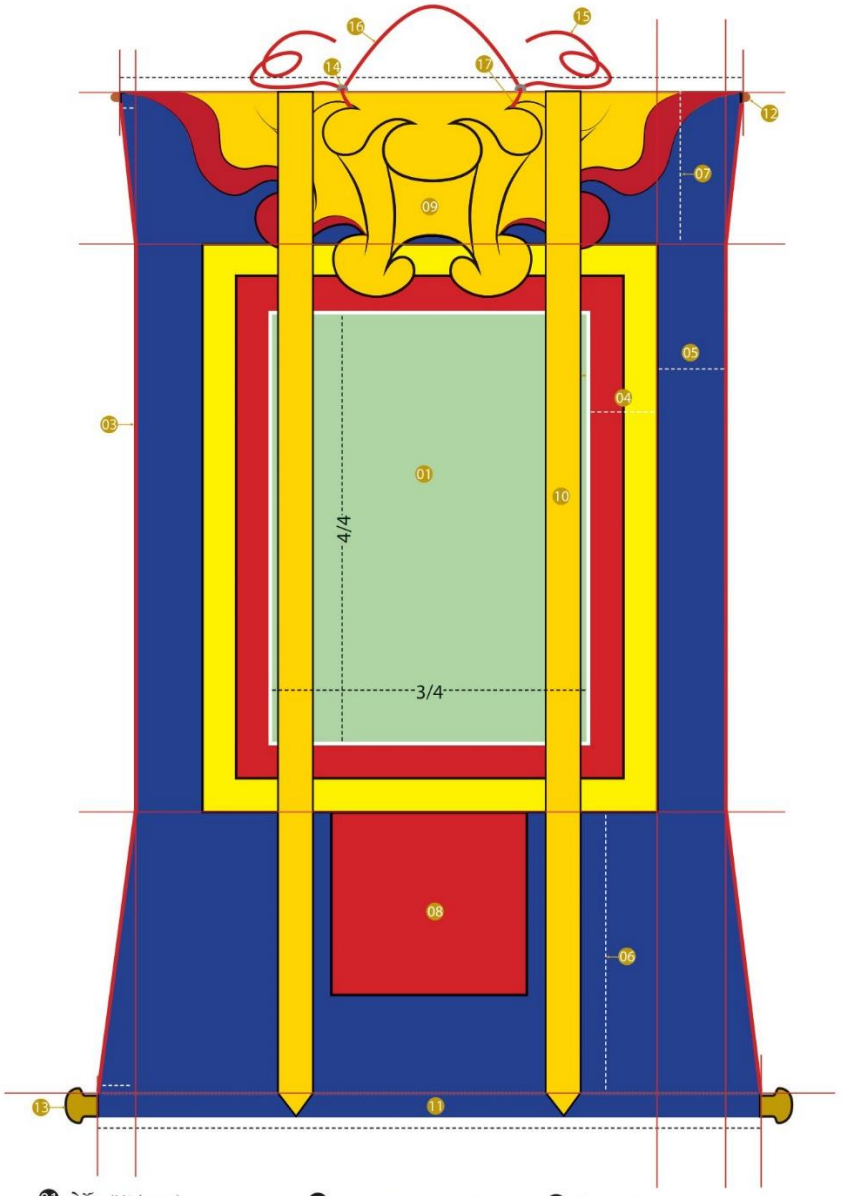

Fig.1: Thangka measurement

Annex A

(Normative)

Standard Measurement for *THAN-jah* Stitching:

1. **1 inch ≤ WJMS ≤ 3 inches**

The given expression defines a range of values for the width of the *Jaa-dri Mar-ser* (WJMS). It states that the width of both the *Jaa-dri Mar-ser* should be greater than or equal to 1 inch and less than or equal to 3 inches. Together, the expression 1 inch ≤ WJMS ≤ 3 inches means that the width of the *Jaa-dri Mar-ser* must fall within the range of 1 inch to 3 inches. This formula provides a range of acceptable values for the width of the *Jaa-dri Mar-ser* that can be used to ensure that the dimensions of the *thangka* are accurate and consistent). The symbol "≤" means "less than or equal to". Therefore, 1 inch ≤ WJMS means that the width of the *Jaa-dri Mar-ser* must be at least 1 inch or greater. Similarly, the expression WJMS ≤ 3 inches means that the width of the *Jaa-dri Mar-ser* must not exceed 3 inches.

2. CWJMS = (2(WJMS))

The given expression defines the combined width of the *Jaa-dri Mar-ser* (CWJMS) as equal to twice the width of the *Jaa-dri Mar-ser* (2(WJMS)). The width of the *Jaa-dri Mar-ser* is represented by the variable WJMS. By multiplying the width of the *Jaa-dri Mar-ser* by 2, we get twice its value. Therefore, the formula CWJMS = 2(WJMS) means that the combined width of the *Jaa-dri Mar-ser* is equal to twice the width of the *Jaa-dri Mar-ser*. This provides a straightforward way to calculate the combined width of the *Jaa-dri Mar-ser* based on the width of the *Jaa-dri Mar-ser* itself).

3. HJMS = HM + (2(WJMS))

The given expression defines the height of the *thangka* (HJMS) as the sum of two values: the height of the *mā-loong* (HM) and twice the width of the *Jaa-dri Mar-ser* (2(WJMS)). The width of the *Jaa-dri Mar-ser* is represented by the variable WJMS. By multiplying the width of the *Jaa-dri Mar-ser* by 2, we get twice its value. By adding the height of the *mā-loong* to twice the width of the *Jaa-dri Mar-ser*, we get the height of the *Jaa-dri Mar-ser*. This formula provides a way to calculate the height of the *Jaa-dri Mar-ser* based on the height of the *mā-loong* and the width of the *Jaa-dri Mar-ser*.

4. WTJZ = CWJMS

The given expression defines the width of the *THAN-jah Zur* (WTJZ) as equal to the combined width of the *Jaa-dri Mar-ser* (CWJMS). The combined width of the *Jaa-dri Mar-ser* is represented by the variable CWJMS. This means that the width of both the *Jaa-dri Mar-ser* are added together to give us a single value that represents their combined width. The formula WTJZ = CWJMS, therefore, means that the width of the *THAN-jah Zur* is equal to the combined width of the *Jaa-dri Mar-ser*. This provides a straightforward way to calculate the width of the *THAN-jah Zur* based on the width of the *Jaa-dri Mar-ser*.

5. HLTJ = (HM/2) + CWJMS

The given expression defines the height of the Lower *THAN-jah* (HLTJ) as the sum of two values: half of the height of the *mā-loong* (HM/2) and the combined width of the *Jaa-dri Mar-ser* (CWJMS). The combined width of the *Jaa-dri Mar-ser* is represented by the variable CWJMS. This means that the width of both the *Jaa-dri Mar-ser* are added together to give us a single value that represents their combined width. By adding the combined width of the *Jaa-dri Mar-ser* to half of the height of the *mā-loong*, we get the height of the *Lower THAN-jah*. This formula provides a way to calculate the height of the Lower *THAN-jah* based on the height of the *mā-loong* and the width of the *Jaa-dri Mar-ser*.

6. LBELTJ = LM + (2(CWJMS)) + (2(WTJZ)) + (2(WTJZ/2))

The given expression LBELTJ represents the length of the bottom edge of a lower *THAN-jah*. It can be calculated by adding the length of the *mā-loong* (LM) to two times the combined width of the *Jaa-dri Mar-ser* (CWJMS) plus two times the width of the *THAN-jah Zur* (WTJZ) and two times half of the width of the *THAN-jah Zur* (WTJZ/2). In simpler terms, to find the length of the bottom edge of a lower *THAN-jah,* you need to add up the length of the *mā-loong*, twice the width of the *Jaa-dri Mar-ser*, twice the width of the *THAN-jah*, and twice half of the width of the *THAN-jah Zur* to account for the slanting edge.

7. WD = (LM + 2(CWJMS) + 2(WTJZ) + 2(WTJZ/2))/3

Dhong is a term used to refer to a patch attached right in the center of the lower *THAN-jah* that represents the traditional Bhutanese door. To calculate the Width of the *Dhong* (WD), you take the total length of the Lower *THAN-jah,* which is the sum of the length of the *mā-loong* (LM) plus twice the combined width of the *Jaa-dri Mar-ser* (2(CWJMS)) plus twice the width of the *THAN-jah Zur* (2(WTJZ)) plus half the width of the *THAN-jah Zur* (WTJZ/2). Then, you divide this sum by 3 to get the width of the *Dhong*).

8. HD = 2/3 * (HLTJ)

To calculate the height of theDhong, you need to take 2/3 of the height of the lower *THAN-jah*. The height of the lower *THAN-jah* is the sum of the length of the *mā-loong* (LM), twice the combined width of the *Jaa-dri Mar-ser* (2(CWJMS)), twice the width of the *THAN-jah Zur* (2(WTJZ)), and half the width of the *THAN-jah Zur* (WTJZ/2).

9. LUELTJ = LM + (2(CWJMS)) + (2(WTJZ))

LUELTJ refers to the length of the upper edge of the lower *THAN-jah.* To calculate this, you need to add the length of the *mā-loong* (LM) to two times the combined width of the *Jaa-dri Mar-ser* (CWJMS) plus two times the width of the *THAN-jah Zur* (WTJZ). The resulting sum represents the length of the upper edge of the lower *THAN-jah* to account for the slanting edge.

10.HUTJ = (HLTJ/2)

HUTJ is the abbreviation for the Height of Upper *THAN-jah*. This formula states that the height of the upper *THAN-jah* is equal to half the height of the lower *THAN-jah* (HLTJ). In other words, if you know the height of the lower *THAN-jah*, you can use this formula to calculate the height of the upper *THAN-jah*. The formula divides the height of the lower *THAN-jah* by 2 to get the height of the upper *THAN-jah*.

11.LLEUTJ = LM + (2(CWJMS)) + (2(WTJZ))

The given expression LLEUTJ stands for the length of the lower edge of the upper *THAN-jah*. It is calculated by adding the length of *mā-loong* (LM) to two times the combined width of *Jaa-dri Mar-ser* (CWJMS) and two times the width of *THAN-jah Zur* (WTJZ). The resulting sum gives the length of the lower edge of the upper *THAN-jah* to account for the slanting edge.

12.LUETJ = LM + (2(CWJMS)) + (2(WTJZ)) + (2(WTJZ/2))

The given expression LUETJ stands for the length of the upper edge of *THAN-jah*. To calculate this length, you need to add the length of the *mā-loong* (LM), two times the combined width of the *Jaa-dri Mar-ser* (CWJMS), and two times the width of the *THAN-jah (Zur* (WTJZ), plus half the width of the *THAN-jah Zur* (WTJZ/2) again. This gives you the total length of the upper edge of the *THAN-jah* to account for the slanting edge.

Definition of variable expressions:

"HM" represents the height of mā-loong.

“LM” represents length of the mā-loong

“JMS” represents Jaa-dri Mar-ser

“TJ” represents THAN-jah.

“TJZ” represents THAN-jah Zur

“HJMS” represents height of Jaa-dri Mar-ser

"WJMS" represents the width of Jaa-dri Mar-ser

“CWJMS” refer to a combined width of the Jaadri “mar & ser”

“LJMS” represents the length of Jaa-dri Mar-ser.

“HLTJ” represents the height of lower THAN-jah

"WTJZ" represents the width of the THAN-jah poor.

“LUELTJ” refers to the length of the upper edge of the lower THAN-jah

“LLEUTJ” refers to the length of the lower edge of the upper THAN-jah.

“LTJ” represents the lower part of THAN-jah.

“HUTJ” refers to the Height of Upper THAN-jah

LUETJ stands for the length of the upper edge of THAN-jah.

“UTJ” represents the upper THAN-jah.

Annex B

(Informative)

Iconometric

The basic iconometric measurement for sitting posture of any Choeku types need to meet the basic measurement given below:

1. The proportionate height and width of any sitting posture of iconography are determined using a basic measurement system:
    a. The base measurement (the basic measurement or size used as a reference point for determining the proportions of an iconography) is determined based on the size requirement of the painting scroll (mā-loong).
    b. The total proportionate height of the sitting posture is obtained by multiplying the base measurement by 9.5 (any unit of measurement used, can be arbitrary, e.g. handspan) .
    c. The total measurement of the body width is obtained by multiplying the base measurement by 4.
    d. The right and left sides of the posture are determined by drawing a vertical and horizontal line from the center. A grid is then created using the base measurement to proportion the body part of the icon.

Based on the above measurement system for determining the proportionate height and width of a sitting posture in iconography, the following is the formula:

A. Total proportionate height of sitting posture = Base measurement x 9.5
B. Total measurement of body width = Base measurement x 4

2. To proportion the facial parts of the icon, the following measurements are used:
    a. The head size is proportioned by multiplying the base measurement by 1.25.
    b. The face size is proportioned by multiplying the base measurement by 1.5.
    c. The location of the facial parts (eyes, ears, nose, and mouth) is determined by dividing the total face measurement by the base measurement and drawing a grid. The eyes, ears, and nose are located at the center of the grid, whereas the mouth falls at the center of the lower grid.

Based on the above measurement system, the proportion of any facial parts of the iconography, the following formula can be used:

a. Head size = Base measurement x 1.25
b. Face size = Base measurement x 1.5

By following these steps, the basic iconometric measurement for sitting posture can be accurately determined.

To locate the facial parts on the icon, the following formula can be used:

Grid size = Total face measurement / Base measurement

The eyes, ears, and nose are located at the center of the grid.

The mouth is located at the center of the lower grid.

Annex C

Steps for Sketching (Drawing)

1. Design/draw a sketch on a separate sheet. (Most create design/draw sketch on a separate sheet while a few experts draw directly on the canvas)
2. Pounce the design on the canvas by using prick and pounce technique (Tsakpar)
3. Trace over the pattern/design with a pencil to make the guide more visible and durable.

Note: *Traditionally, drawing is done in layers. One begins by drawing the main icon (lhatsho), followed by other details around and in the background.(Centre to out). Iconometric protocol needs to be followed while drawing lhatsho. Refer Annex B*

Annex D

Steps for Painting

1. Prepare the required colours and equipments for painting
2. Start painting on the prepared canvas.
3. Make fine boundary lines by using the detail brush. The process is called “Chay” in traditional Bhutanese painting.
4. Create the goeri/seri patterns.
5. The final stage/process in traditional art of painting is known as "Chen-Zhay,". Artist adds intricate details to the painting, particularly on the facial features, particularly eyes, ears, nose and mouth.

Note: *Similar to drawing, painting is also carried out in layers. The painting starts from the background progressing towards the main figure (Back to front). For instance, sky, earth, cloud, flowers and other figures and motifs, and finally the main image.*

Annex E

Steps for Stitching THAN-jah

1. Prepare the required materials for THAN-jah
2. Determine the size of the mā-loong, and cut the materials/fabrics. The measurement formula is attached as annexure.
3. Stitch the Jaa-dri mar-ser (Red and yellow) together.
4. Stitch the Thrue-ki, the inner cord to Jaa-dri-Mar-ser.
5. Join the four sides of Jaa-dri-mar-ser to make a frame, ensuring accuracy by using a Lopen (framing square/L-shaped Measuring tool) to align with the mā-loong.
6. Divide the lower part of the THAN-jah into three equal parts. Attach the Dong to the Center part of the lower THAN-jah. Ensure that the height of the Dong is ⅔ of the height of the lower THAN-jah. Join all three parts of the lower THAN-jah together.
7. Attach/stitch THAN-jah Zur to the sides of Jaa-dri-mar-ser
8. Attach/stitch the lower and upper THAN-jah to the jaa-dri-mar-ser respectively.
9. Stitch outer cord (Thrue-ki) on the two sides of the THAN-jah.
10. Attach the mā-loong to the THAN-jah.
11. Attach Nangshab (lining) to the THAN-jah
12. Align and attach the Zhay-kheeb, Dar-chang, Dam-tha, Chang-thap (1 for hanging and 1 for holding Zhay-kheeb)
13. Attach the Top Dowel, and the bottom Dowel.
14. Attach the decorative knob (Tog) on the edges of the bottom dowel.

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