Proposal to Encode Chisoi in the Universal Character Set

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1. **Introduction**

This is a proposal to encode Chisoi in the Universal Character Set. Chisoi is used to in West Bengal, Odisha and Jharkhand for writing the Kurmali /Kudmali language. This document provides a description of the writing system, implementation details, a code chart and names list, and a few specimens. It supersedes the following documents:

- L2/21-183 'Proposal to Encode Chisoi in the Universal Character Set'

It incorporates comments regarding previous proposals made in:

- L2/21-174 'Recommendations to UTC #169 October 2021 on Script Proposals'

2. **Backgrounds**

Chisoi(ᱝᱪᱦᱚᱴ/ᱝᱪᱦᱚᱴ) is a script used for writing **Kurmali** (Devanagari:कुड़माति, Bengali:কুড়মালি, Odia:କୁଡ଼ମାଲି, Chisoi:ᱝᱪᱦᱚᱨᱪᱝᱯ, IPA:[kuɽmaːli]) (ISO 639-3:kyw), is an Indo-Aryan language (classified under Bihari group) of 311,175 people (census 2011) primarily spoken in Seraikela Kharsawan, Khunti, East Singhbhum, West Singhbhum Districts of Jharkhand; Mayurbhanj, Keonjhar, Balasore Districts of Odisha; Purulia, Bankura, Jhargram, South Dinajpur and Paschim Medinipur Districts of West Bengal. Kurmali is closely related to **Khortha** language of Jharkhand. **Panchapargania** (ISO 639-3:tdb) is a dialect of Kurmali language. It is spoken by 257,000 people (2011)(Ethnologue) in 'Panchapargana' (Bundu, Silli, Rahe blocks of Ranchi; Tamar, Arki blocks of Khunti and Jhalda I & II blocks of Purulia) region of India. It is an unwritten language. Kurmali is also mother tongue of some people of Chhattisgarh, Assam and other parts of India even in Bangladesh and Nepal. Kurmali language is spoken by Kur(d)mi people. Kur(d)mi people of Assam (Golaghat district) mostly referred Assamese as their first language as like Kur(d)mi people of Nepal[13] referred Bhojpuri. Kur(d)mi people of Bangladesh (Sylhet, Moulavibazar and Habigonj districts) still using Kurmali as their primary language. Kur(d)mi includes Mahato, Mahata, Kurmi, Kudumi, Mohanta, Mahanta, Bagal, Kamar, Kamhar,Tanti, Harhi, Muchi, Napit, Dhopa, Dhai, Morol, etc sobriquet. Kurmali was recognized as an additional official language of Jharkhand and West Bengal.

Kurmali Language written in four scripts i,e. Chisoi, Devanagari, Bengali and Odia. Devanagari and Bengali are commonly used in official purposes in Jharkhand and West Bengal, but Chisoi is the own script of Kurmali Language. Many peoples and Kurmali linguists created their own version of Kurmali script in last few decades, but unfortunately those are not accepted by the people and not implemented later. Jayanta Kumar Mahata of Bamundiha village, Medinipur district had invented Chisoi scripts in 1986. He gets inspiration to create a new writing system from his grandfather. His grandfather was one of the famous Kurmali folklore singer of his time. He started to collect various ancient symbols, Rangolis, Alpanas, ritual signs of Kurmali community from his school time [see fig.1]. After completing his graduation, he created a new script in 1986[see fig.6] and named *'Chisoi'*. Most of the letters derived from ⛤, reflects their deity *Buṛhābābā*. This symbol ⛤ also known as *'Svastika'* in Bengali Hindu community.

Figure 1: Showing various Kurmali traditional symbols as well as Rangoli and Alpanas.

2.1 Developments

Jayanta Kumar Mahata named the script as *'Kurmali Lipi'*. But the word 'Chisoi' is very popular and well known among to Kudmali community. There is a very famous rhyme among the Kurmali linguistic community i.e

'Cis Cisôi Cisio, Cisā Cisi Sikhio' ꠐꠔꠝ ꠐꠔꠍꠐ ꠐꠔꠍꠐꠘ, ꠐꠔꠍꠐ ꠐꠔꠍꠐ ꠝꠐꠔꠝꠐꠔꠦ

And the meaning of word 'Chisoi' is drawn /written in Kurmali language. Therefore he considered '**Chisoi**' is an appropriate name for this new script. He used name **Chisoi** first time in his publication *'Kurmali Chisoi Chinhap'* in 1994.

In 1994, Jayanta Kumar Mahata established *'All India Kurmali Chisoi-A Society'* ꠐꠘ ꠐꠝꠐꠐꠇꠐꠞ ꠐꠐꠄꠇꠐꠈꠐꠔ ꠐꠐꠝꠔꠐꠐꠔ—ꠐ ꠝꠐꠝꠔꠐꠐꠔꠔ and *'Kurmali Chisoi-A writers and Artist Association'* in 2009. In 2016, Jayanta Kumar Mahata, Narayan Mahata along with 3 more people established *'Kurmali Chisoi Chari Foundation'* trustee-board. Later, he established *'Kurmali Chisoi-A Teachers' Association'* ꠐꠐꠄꠇꠐꠈꠐꠔ ꠐꠔꠝꠐꠔꠐ-ꠔ ꠐꠔꠐꠔꠐꠝ ꠐꠝꠐꠝꠐꠔꠐꠐꠝꠔꠝ in 2019.

All India Kurmali Chisoi-A Society opened first Kurmali private elementary schools and adult education center in 2009. In 2021-22, 49 new primary schools got opened only in Purulia district. At present Jhargram has 20 schools, 606 students and 49 teachers. Similarly, there are 52 schools, 817 students, 104 teachers in Purulia and 3 schools, 8 teachers and 61 students in Paschim Medinipur. And 2 schools run over Jharkhand and Odisha. These schools are specifically for Kurmali and Chisoi learning. In 2009, some schools got formal recognition from State Government. Nowadays, 10 Kurmali elementary schools are running under Govt. of India's *Samagra Shiksha Mission* समग्र शिक्षा अभियान schemes, like Gadra, Sonakhuli, Joypur, Barsole, Dwarkanath, etc. Some other private organizations are teaching Chisoi script in Odisha and Jharkhand.

In 2009, *All India Kurmali Chisoi-A Society* published first ever Kurmali primer *'Kuṛmāli Cisoi Cinhāp'* ꠐꠐꠄꠇꠐꠈꠐꠔ ꠐꠔꠝꠐ ꠐꠔꠝꠐꠇꠐꠔꠝ for class-I [see fig.7]. Later on Mangal Mahata compiled another primer *'Kuṛmāli Ô-Bô-Āi Suluk Pũthi'* ꠐꠐꠄꠇꠐꠈꠐꠔꠐ-ꠐ-ꠐ ꠝꠐꠘꠐꠐ ꠐꠐꠇꠝꠐꠔ in 2017. Ujjwal Mahata from Rajshahi, Bangladesh compiled first ever Kurmali primer *'Gidôrũenke Kuṛmāli Cisôi'* ꠐꠐꠐꠐꠐꠝꠐꠔ ꠐꠐꠄꠇꠐꠈꠐꠔ ꠐꠔꠝꠐꠔꠔ for Kurmali speakers of Bangladesh in Feb 21, 2021. In Bangladesh, Tapan Mahato conducting online Chisoi teaching learning workshops for Kurmali speakers of Bangladesh

Two digitized fonts are available for Chisoi, *''KurmaliChisoy''* (True Type) was designed by Pankaj Mahato in 2000. All old Kurmali books, magazines, banners, pamphlets, etc used this font. Another True Type font *"Biswa_Chisoi"* designed by Biswajit Mandal in the year of 2021. It is being used to print all new editions of books; banners, etc. like new edition of textbooks *'Kuṛmāli Sāṛā Bāhār'* ꠐꠐꠄꠇꠐꠈꠐꠔ ꠝꠐꠔꠝꠐꠞ ꠐꠔꠐꠇꠐꠔ for III & *'Kuṛmāli Sāṛā Bāhār'* ꠐꠐꠄꠇꠐꠈꠐꠔ ꠝꠐꠔꠝꠐꠞ ꠐꠔꠐꠇꠐꠔ for IV.

2.2 Usage

Chisoi is currently used in writing and print for various purposes:

- *Educational Materials*

  Primary level educational materials for Kurmali published by All India Kurmali Chisoi-A Society, Raghunathpur, Jhargram District (W.B.). Examples of primers are *'Kuṛmāli Cisoi Cinhāp'* ꠐꠐꠄꠇꠐꠈꠐꠔ ꠐꠔꠝꠐ ꠐꠔꠝꠐꠇꠐꠔꠝ for class-I and *'Kuṛmāli Cisoi Cinhāp Dôṛi Khõ̃aṛā'* ꠐꠐꠄꠇꠐꠈꠐꠔ ꠐꠔꠝꠐ ꠐꠔꠝꠐꠇꠐꠔꠝ ꠐꠐꠔ ꠐꠐꠇꠐꠔꠝ for class-II, etc in 2009. [see fig.7]

  Mangal Mahata compiled another primer *'Kuṛmāli Ô-Bô-Āi Suluk Pũthi'* ꠐꠐꠄꠇꠐꠈꠐꠔ ꠐ-ꠐ-ꠐ ꠝꠐꠘꠐꠐ ꠐꠐꠇꠝꠐꠔ in 2017. Ujjwal Mahata (Bangladesh) compiled first ever Kurmali primer *'Gidôrũenke Kuṛmāli Cisôi'* ꠐꠐꠐꠐꠐꠝꠐꠔ ꠐꠐꠄꠇꠐꠈꠐꠔ ꠐꠔꠝꠐꠔꠔ for Bangladesh in 2021. [see fig.27]

  Chariyan Mahato has written pre-primary textbook *'Hāmôr Kuṛmāli Cisôi'* ꠐꠔꠝꠐ ꠐꠐꠄꠇꠐꠈꠐꠔ ꠐꠔꠝꠐꠔꠔ in 2022.

- *Newspaper*

  A weekly newspaper of Kurmali *'Āddās'* ꠐꠐꠇꠐꠝ in Chisoi first time published in 16[th]June 2013, edited by Narayan Mahata. Now it is not publishing from 2 years due to COVID pandemic. New edition will be published in new font so soon. Another monthly magazine *'Pôrôm'* পরম (2017) published in Bengali, sometime it carries Kurmali articles.[see fig.26]

- *Ephemera*

'Kurmali Chisoi-A Teachers' Association' 𐰃𐰴𐰞𐰃𐰴𐰤𐱅 𐰃𐰴𐰷𐰮𐱅-𐰭 𐰭𐰃𐰃𐰞𐰮𐰶 𐰞𐰮𐰮𐰢𐰃𐰞𐰞𐰃𐰢 produces and distributed various posters, banners and pamphlets. [see fig.22]

- *Linguistic works*

  The Kurmali-to-English dictionary *'Kuṛmāli Sāṛābhõãṛār'* 𐰃𐰴𐰞𐰃𐰴𐰤𐱅 𐰞𐰮𐰮𐰶𐰮𐰃𐰞𐰞𐰃𐰞 published in 2014. And Chisoi-to-English-to-Bengali – Kurmali dictionary *'Kuṛmāli Sāṛā bhõãṛār'* 𐰃𐰴𐰞𐰃𐰴𐰤𐱅 𐰞𐰮𐰮𐰶 𐰃𐰃𐰞𐰞𐰃𐰞 published in 2022.[see fig.19]

- *Literary Works*

  Kurmali poetry book *'Kuṛmāli Cāri Disā'* 𐰃𐰴𐰞𐰃𐰴𐰤𐱅 𐰞𐰮𐰶𐱅 𐱅𐰮𐰮𐰶 by Mangal Mahata in both Chisoi and Bengali scripts in 2016 [see fig.29].

  Kurmali poetry book *'Cāriceṭhā'* 𐰞𐰮𐰶𐱅𐰮𐰞𐱅𐰞 by Narayan Mahata in 2014 [see fig.30].

  The Kurmali prose *'Bulān'* 𐰃𐰭𐰤𐰞𐰢 by Maniklal Mahata in 2018 [see fig.28].

- *Workshops*

  'All India Kurmali Chisoi-A Society' 𐰭𐰤 𐱅𐰮𐰮𐱅𐰮𐰞 𐰃𐰴𐰞𐰃𐰴𐰤𐱅 𐰃𐰴𐰷𐰮𐱅-𐰭 𐰞𐰮𐰞𐰮𐱅𐱅𐱅 conducts Half Yearly Chisoi Teaching-Learning Workshop every year. In 2017, it conducted a workshop in Jharkhand collaboratively with *'Kurmi Sanskriti Bikas Samiti Dhalbhumgarh'*.[see fig. 16(d)]

  In 2022, 'One day workshop on Kurmali Chisoi chari education & its future aspect' organized by *'Manbhum Dalit Sahitya O Sanskriti Sangha'* in Jhargram. [see fig.16(e)]

- *Digital Works*

  'All India Kurmali Chisoi-A Society' launched *'All India Kurmali Shaksharta Mission of Chisoi'* and *'ChisoiKurmali'* Android App (available in Google Playstore) in the November, 2021. It is a digital platform to learn Chisoi. [see fig.31][^]

3. **Script**

The script is assigned the name '**Chisoi**'. The proposed characters are intended for presenting current forms of Chisoi. The set consists of 40 characters: 28 letters, 2 signs and 10 digits. [see fig.6,7,10]

3.1 Structure

Chisoi (also called as *Kuṛmāli Cisoi* 𐰃𐰴𐰞𐰃𐰴𐰤𐱅 𐰃𐰴𐰷𐰮𐱅, *Cisôi lipi* 𐰃𐰴𐰷𐱅 𐰤𐱅𐰮𐱅 or *Cisoi lipi* 𐰃𐰴𐰷𐰮𐱅 𐰤𐱅𐰮𐱅) is written from left-to-right. It has a feature of an alphabet: vowels are written as full letters. However consonants may have an inherent vowels; it typically is pronounced [ɔ] or [ə], normally never occurs in final position but some cases it can occur during to pronounce '*Tadbhav* तद्भव' words. It means 'a word used in one language which is a distorted from of a word in another language'. For examples: 𐰞𐰮𐱅𐰮𐱅𐰮 '*māhātô* Surname, 𐰞𐰃𐰢𐰮 '*sāntô* Peaceful, 𐰮𐰞𐰮 '*môstô* Big in size, 𐰃𐰲𐰞𐰮𐰮 '*ôbgônôtô* Known', etc[see fig.19].

The script has no regular system of conjuncts but it has SISO to mute the inherent vowel[see fig.2,3,4 &5].The letter ঃ JARAHA[ʰ] is used after consonants to indicate aspirations: 𐰃ঃ khô [kʰɔ],𐰮ঃ ghô [gʰɔ],𐰃ঃ chô [ʧʰɔ],𐰮ঃ jhô [ʤʰɔ], etc.

Chisoi is an alphabetical script that is written from left-to-right. There are no attested ligatures. The typical didactic presentation of Chisoi is shown with one major section; signs are included in this section. The section is a chart with ten rows and three columns, where first to fourth, sixth and seventh row's first letter is a vowel, and the letter names are based on Brahmic style. [see fig.6,7,8,9,10]

ᰇ	ᰏ	ᰕ
A	**BA**	**AAI**
ᰈ	ᰐ	ᰖ
AA	**GA**	**TA**
L	ᰑ	ᰗ
E	**SA**	**NA**
ᰉ	ᰒ	ᰘ
I	**KA**	**RA**
ᰊ	ᰓ	ᰙ
MA	**HA**	**RRA**
ᰋ	Ɛ	ᰚ
U	**DA**	**LA**
Θ	ᰔ	ᰛ
O	**NYA**	**NGA**
ᰌ	ᰜ	ᰝ
CA	**JA**	**PA**
ᰟ	ᰞ	ᰠ
ANUSVARA	**YA**	**DDA**
ᰍ	ᰡ	ᰢ
TTA	**JARAHA**	**SISO**

3.2 Chisoi sign ANUSVARA<◌̊>

- The sign (◌̊) is written on the top of the vowels and consonants in question except JARAHA. It is a nasalization mark of Chisoi. It corresponds to the Candrabindu in Devanagari, Bengali and Odia. Its IPA is [˜].For examples: ᰉ̊[ĩ], ᰈ̊[ã], ᰉ̊[ĩ], ᰒ̊[kɔ̃], ᰓ̊[gɔ̃], etc. To represent the nasalized aspirated consonants, the position of sign (◌̊) will be, For examples: ᰒ̊ː [kʰɔ̃], ᰓ̊ː[gʰɔ̃], ᰝ̊ː [pʰɔ̃],ᰖ̊ː [tʰɔ̃],ᰞ̊ː [qʰɔ̃], etc.[see fig.18]

- In the attached specimens sign ANUSVARA shown as (0), it is due to font's standard. The actual sign of ANUSVARA is (◌̊). It has similarity in glyph with *'COMBINING RING ABOVE'* U+030A (◌̊), but this proposal for **separate** encoding of CHISOI SIGN ANUSVARA.

3.2.1 Position of Chisoi Sign ANUSVARA<◌̇>

The position of sign (◌̇) will on the top of the both vowels and consonants. But in the old font "KurmaliChisoy" shows different positions for different letters. It occurs due lack of Unicode standardization. Actually the correct position of sign (◌̇) is the top middle of the letters. For example:

Figure 2: Comparison between original font (first line) and new font (bottom line). Old font is showing non similarities in position of Anusvara but the new font showing accurate top middle position of Anusvara.

3.3 Chisoi letter JARAHA<ः>

- The letter (ः) JARAHA '*Jôṛô'hô*' ꠎꠞꠦ means 'to add'. It is used after consonants to **indicate aspirations** [ʰ].JARAHA never place in the initial position of any Kurmali words, always used after consonants. For examples: ꠇ[kɔ]+ः[ʰ]=ꠇः[kʰɔ], ꠉ[gɔ]+ः[ʰ]=ꠉː[gʰɔ], ꠐ[ʈɔ]+ः[ʰ]=ꠐ[ʈʰɔ], ꠔ[t̪ɔ]+ः[ʰ]=ꠔ[t̪ʰɔ], ꠌ[ʧɔ]+ः[ʰ]=ꠌ[ʧʰɔ] ,etc.

- In Kurmali writing system there is no use of visarga. JARAHA is the unique character which is not available in Devanagari, Bengali and Odia scripts because it used to make aspirated consonants. It has similarity in glyph with '*BENGALI SIGN VISARGA*' U+0983 (ঃ), but this proposal for **separate** encoding of CHISOI LETTER JARAHA.

3.3.1 Position of Chisoi letter JARAHA<ः>

- To represent the nasalized aspirated consonants, the position of (ः) JARAHA will be after the sign ANUSVARA, For examples: ꠇ+◌̇+ः=ꠇ̇ः [kʰɔ̃], ꠉ+◌̇+ः=ꠉ̇ः [gʰɔ̃], ꠙ+◌̇+ः=ꠙ̇ः [pʰɔ̃], ꠐ+◌̇+ः=ꠐ̇ः [ʈʰɔ̃], ꠗ+◌̇+ः=ꠗ̇ः [ɖʰɔ̃], etc.[see fig.13][§ 3.2]

- To represent the inherent vowel less aspirated consonants, the position of (ः) JARAHA will be after the SIGN SISO, For examples: ꠇ+◌̣+ः=ꠇ̣ः [kʰ], ꠉ+◌̣+ः=ꠉ̣ः [gʰ], ꠙ+◌̣+ः=ꠙ̣ः [pʰ], ꠐ+◌̣+ः=ꠐ̣ः [ʈʰ], ꠗ+◌̣+ः=ꠗ̣ः [ɖʰ], etc. [see fig.13][see fig.][§ 3.4]

3.4 Chisoi Sign SISO<◌̣>

- The sign (◌̣) '*Sis'ô*' ꠍꠤꠍꠥ is written in the beneath of the letters in question. Chisoi has no regular system of conjuncts, SISO functions as like to mute the inherent vowel either [ɔ] or [ə] of the consonants. For examples: ꠇ[kɔ]+◌̣=ꠇ̣[k], ꠉ[gɔ]+◌̣=ꠉ̣[g], ꠙ[pɔ]+◌̣=ꠙ̣[p], ꠜ[ŋɔ]+◌̣=ꠜ̣[ŋ], etc.

- To represent the inherent vowel less aspirated consonants, the position of sign (◌̣) will be, For examples: ꠇः[kʰɔ]+◌̣=ꠇ̣ः[kʰ], ꠉः[gʰɔ]+◌̣=ꠉ̣ः[gʰ], ꠌः[ʧʰɔ]+◌̣=ꠌ̣ः[ʧʰ], ꠙः[pʰɔ]+◌̣=ꠙ̣ः[pʰ], ꠐः[ʈʰɔ]+◌̣=ꠐ̣ः[ʈʰ], ꠗः[ɖʰɔ]+◌̣=ꠗ̣ः[ɖʰ], etc.[see fig.12]And there is no single letter in Chisoi orthography which is containing both **SISO** and **anusvara** together like ꠐ̣̇, ꠙ̣̇, ꠉ̣̇ etc.

3.4.1 Other uses of Chisoi Sign SISO <◌̣>

- **Glottalizational mark:** If the last consonant letter of any word carries SISO <◌̣>, it reflects glottal stop phoneme. For examples: ꠅꠘꠢꠝ [ɔnhɔʔ] '*inexpert*', ꠅꠉꠝ [ɔgɔmʔ] '*not moving*', ꠅꠛꠖꠥꠞ[ɔbdʒaɽʔ] '*dirtful*', etc.

If any word ended with letter LETTER A **<ट>** and its left sided letter contains SISO **<◌ֻ>**, then that letter will carry glottal stop phoneme. For example: **ꠡ꠨ꠡ** [sisʔɔ] *'stop'*, etc.[see fig.17,12]

$$< C_{onsonant} + ◌ֻ + ट >$$

- If LETTER I **<ट>** carries SISO **<◌ֻ>** in a word, then left sided letter of **<ट>** will pronounce with inherent phoneme [ɔ] or [ə]. For examples: **ꠍꠥꠡꠡꠍ** [aɔinɔʈal] *'Eight'*, **ꠀꠀꠃꠡ** [ʤɔidʰa] *'warrior'* and **ꠡꠦꠡꠍ** [ʧisɔi] *'Chisoi'* [see fig.12].

$$< C_{onsonant}/V_{owel} + ट + ◌ֻ + C_{onsonant}/V_{owel} >$$

3.5 Chisoi letter AAI**<ꠇ>**

It is a diphthong vowel letter with combination of LETTER AA and LETTER I. Its glyph is a combination of two letters **ट+ट=ꠇ**. Its IPA is [ai]. To represent this sound we use আइ (in Devanagari), আই (in Bengali) and ଆଇ (in Odia). For examples: **ꠇꠥꠇ** [aina:] আइना/আইনা/ଆଇନা, *'Mirror'* and **ꠇꠥꠇ** [aĩsa:] আইঁসা/আইঁসা/ଆଇଁଥା, *'name of a month'*, etc.

3.6 Chisoi letter RRA**<ꠃ>**

It is the voiced retroflex flap ɽ[ɽ] of Chisoi. To represent this sound we use ड़ (in Devanagari), ড় (in Bengali) and ଡ଼ (in Odia). For examples: **ꠡꠥꠃ** [ɔbgɔɽ] अब्गड़/অব্গড়/ଅବ୍ଗଡ଼, *'Stupid'*, **ꠡꠥꠃ-ꠁꠥꠃ** [ɔgɔɽ-bɔgɔɽ] अगड़-बगड़/অগড়-বগড়/ଅଗଡ଼-ବଗଡ଼, *'Meaningless'*, **ꠡꠥꠃꠥꠡꠥꠍ** [kuɽma:li] कुड़मालि/কুড়মালি/କୁଡ଼ମାଲି, etc.

3.7 Digits

There is full set of decimal digits: **0** ZERO, **১** ONE, **৬** TWO, **৩** THREE, **৪** FOUR, **S** FIVE, **৪** SIX, **P** SEVEN, **U** EIGHT, **৬** NINE [see fig.10, 25].

3.8 Punctuation

Chisoi uses *danda* <|> and *double danda* <||> at the end of the sentence. *double danda* <||> was not included in previous proposal L2/21-183 [24]. Many Indic scripts use the *danda* U+0964 and *double danda* U+0965 from the Devanagari block. Since Bengali uses *danda* and *double danda* from the Devanagari block vis script extensons and therefore keyboard layouts in the area share the same character, it is proposed to extend the same *danda* and *double danda* usage to the Chisoi script as well, to avoid confusion and additional complexity for users.

There are no script-specific punctuation marks. Latin marks, such as : ; " () ? / - and ! are used [see fig.24].

4. Character names

The name of the script is Chisoi '*Cisoi*' **ꠡꠦꠡꠍ** 'Written' or 'Drawn'. The name Chisoi first time found in the literature of Kurmali '*Kuṛmāli Cisoi Cinhāp'* in 1994.Proposed character names for this proposal are given below [see table no.1].

A	B	C	D	A	B	C	D	A	B	C	D
ट	A	ô	[ɔ]	ट	KA	kô	[kɔ]	ঃ	NGA	ôṅ	[ŋɔ]
૦	BA	bô	[bɔ]	ω	RA	rô	[rɔ]	ర	CA	cô	[ʧɔ]
౬	AAI	ā'i	[ai]	પ	MA	mô	[mɔ]	ప	JA	jô	[ʤɔ]
౮	AA	ā	[a]	∪	HA	hô	[hɔ]	न	PA	pô	[pɔ]
પ	GA	gô	[gɔ]	ω	RRA	ṛô	[ɽɔ]	◌̊	ANUSVARA	õ̃	[˜]
୬	TA	tô	[t̪ɔ]	c	U	u	[u]	य	YA	ôy	[jɔ]
L	E	e	[e]	૭	DA	dô	[dɔ]	౮	DDA	ô'ḍ	[ɖɔ]
౫	SA	sô	[sɔ]	ન	LA	lô	[lɔ]	ट	TTA	ṭô	[ʈɔ]
М	NA	nô	[nɔ]	θ	O	o	[o]	ঃ	JARAHA	jôrô'hô	[ʰ]
౭	I	i	[i]	ω	NYA	'iñ	[ɲɔ]	◌	SISO	sis'ô	

Table 1:column A is showing letters and signs, column B is showing proposed character names, column C is showing native name of letters and column D is showing IPA.

5. Character Shapes

The Chisoi proposed here for encoding in the UCS in the Standard Chisoi, the font ''BISWA_CHISOI'' for the proposed was drawn by Biswajit Mandal in the year 2021. The original font "KURMALICHISOY" was drawn by Pankaj Mahato in the year 2009. All the Kurmali books, documents, specimens, etc those attached here are in original font. The new "BISWA_CHISOI" font used here because original font having lots of imperfections ,that islack of standard qualities in glyphs, problems in positioning of signs, non collinearity in letters and kerning problems in letters. The comparison table no. 1 includes Pankaj Mahato's original font "KURMALICHISOY" and new "BISWA_CHISOI" font [see table no.2].

5.1 Shapes and collinearities

In the original font having the problem of standard quality in glyphs of letters as well as having problem in coaxial of letters. Some letters heights and sizes are different from others. Attached specimens are showing this problem. The new font is perfectly collinear and good looking.
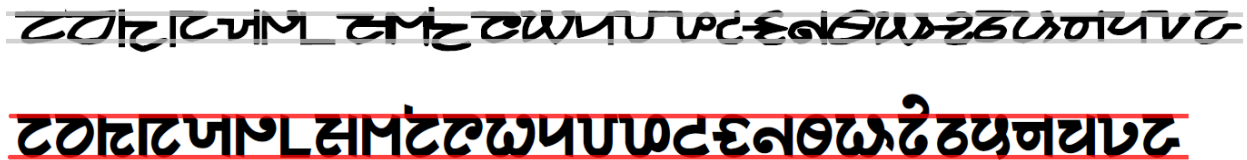
Figure 3: Comparison between original font (first line) and new font (bottom line). Old font is showing non collinearities of letters but the new font showing perfect collinearities as well as beautiful sorts.
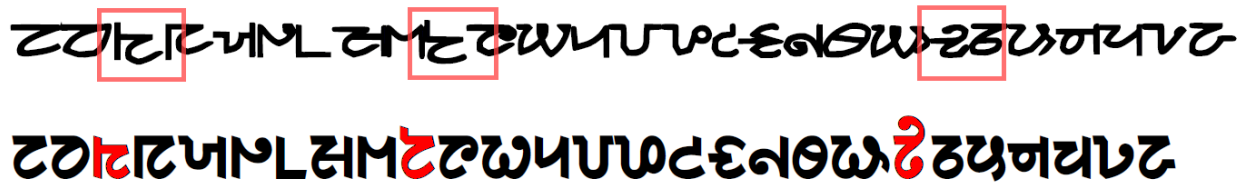
Figure 4: Comparison between original font (first line) and new font (bottom line). Old font is showing the wrong position and size of letter AAI, I and NGA but the new font showing the perfectness.

5.2 Kerning issues between two letters

We are having the proper kerning problem between two letters in the original font. Letters are not perfectly set in the position that is why some letters become stuck with each other and look like a conjunction.[see fig.13]

Figure 5: Comparison between original font (first line) and new font (bottom line). Old font is showing the kerning issues between two letters but the new font showing accurate gap between two letters.

6. Tentative Characters Properties

```
xxx00;CHISOI LETTER A;Lo;0;L;;;;;;N;;;;;
xxx01;CHISOI LETTER BA;Lo;0;L;;;;;;N;;;;;
xxx02;CHISOI LETTER AI;Lo;0;L;;;;;;N;;;;;
xxx03;CHISOI LETTER AA;Lo;0;L;;;;;;N;;;;;
xxx04;CHISOI LETTER GA;Lo;0;L;;;;;;N;;;;;
xxx05;CHISOI LETTER TA;Lo;0;L;;;;;;N;;;;;
xxx06;CHISOI LETTER E;Lo;0;L;;;;;;N;;;;;
xxx07;CHISOI LETTER SA;Lo;0;L;;;;;;N;;;;;
xxx08;CHISOI LETTER NA;Lo;0;L;;;;;;N;;;;;
xxx09;CHISOI LETTER I;Lo;0;L;;;;;;N;;;;;
xxx0A;CHISOI LETTER KA;Lo;0;L;;;;;;N;;;;;
xxx0B;CHISOI LETTER RA;Lo;0;L;;;;;;N;;;;;
xxx0C;CHISOI LETTER MA;Lo;0;L;;;;;;N;;;;;
xxx0D;CHISOI LETTER HA;Lo;0;L;;;;;;N;;;;;
xxx0E;CHISOI LETTER RRA;Lo;0;L;;;;;;N;;;;;
xxx0F;CHISOI LETTER U;Lo;0;L;;;;;;N;;;;;
xxx10;CHISOI LETTER DA;Lo;0;L;;;;;;N;;;;;
xxx11;CHISOI LETTER LA;Lo;0;L;;;;;;N;;;;;
xxx12;CHISOI LETTER O;Lo;0;L;;;;;;N;;;;;
xxx13;CHISOI LETTER NYA;Lo;0;L;;;;;;N;;;;;
xxx14;CHISOI LETTER NGA;Lo;0;L;;;;;;N;;;;;
xxx15;CHISOI LETTER CA;Lo;0;L;;;;;;N;;;;;
xxx16;CHISOI LETTER JA;Lo;0;L;;;;;;N;;;;;
xxx17;CHISOI LETTER PA;Lo;0;L;;;;;;N;;;;;
xxx18;CHISOI SIGN ANUSVARA;Mn;0;NSM;;;;;;N;;;;;
xxx19;CHISOI LETTER YA;Lo;0;L;;;;;;N;;;;;
xxx1A;CHISOI LETTER DDA;Lo;0;L;;;;;;N;;;;;
xxx1B;CHISOI LETTER TTA;Lo;0;L;;;;;;N;;;;;
xxx1C;CHISOI LETTER JARAHA;Lo;0;L;;;;;;N;;;;;
xxx1D;CHISOI SIGN SISO;Mn;9;NSM;;;;;N;;;;;
xxx20;CHISOI DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
xxx21;CHISOI DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
xxx22;CHISOI DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
xxx23;CHISOI DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
xxx24;CHISOI DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
xxx25;CHISOI DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
xxx26;CHISOI DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
xxx27;CHISOI DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
```

```
      xxx28;CHISOI DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
      xxx29;CHISOI DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;
```

6.1 Linebreak.txt

```
xxx00..xxx17;AL # Lo [25] CHISOI LETTER A..CHISOI LETTER PA
xxx18      ;CM # Mn [01] CHISOI SIGN ANUSVARA
xxx19..xxx1C;AL # Lo [04] CHISOI LETTER YA..CHISOI LETTER JARAHA
xxx1D      ;CM # Mn [01] CHISOI SIGN SISO
xxx20..xxx29;AL # Nd [09] CHISOI DIGIT ZERO..CHISOI DGIT NINE
```

6.2 ScriptExtensions.txt

```
# ==========================================================

# Script_Extensions=Beng Deva Dogr Gong Gonm Gran Gujr Guru Knda Mahj Mlym Nand orya Sind Sinh Sylo Takr
Taml telu Tirh Chis

0964            ; Beng Deva Dogr Gong Gonm Gran Gujr Guru Knda Mahj Mlym Nand orya Sind Sinh Sylo Takr
Taml telu Tirh Chis # Po DEVANGARI DANDA

# Total code points: 1

# ==========================================================

# Script_Extensions=Beng Deva Dogr Gong Gonm Gran Gujr Guru Knda Limb Mahj Mlym Nand orya Sind Sinh Sylo
Takr Taml telu Tirh Chis

0965            ; Beng Deva Dogr Gong Gonm Gran Gujr Guru Knda Limb Mahj Mlym Nand orya Sind Sinh Sylo
Takr Taml telu Tirh Chis # Po    DEVANGARI DOUBLE DANDA

# Total code points: 1
```

7. Collations

The collation order is as follows:

ꮓ A < ꭴ BA < ꮄ AAI < ꮅ AA < ꮎ GA < ꮖ TA < L E < ꮝ SA < ꮒ NA < ꮐ I < ꮉ KA < ꮃ RA < ꮮ MA < ꮜ HA < ꮗ RRA < ꮷ U < ꮛ DA < ꮥ LA < ꮪ O < ꮷ NYA < ꮝ NGA < ꮤ CA < ꮳ JA < ꮈ PA < ◌̇ SIGN ANUSVARA < ꮅ YA < ꮙ DDA < ꮵ TTA < ꮨ JARAHA < ◌̣ SIGN SISO < 0 DIGIT ZERO < ꮝ DIGIT ONE < ꮷ DIGIT TWO < ꮮ DIGIT THREE < ꮃ DIGIT FOUR < ꮥ DIGIT FIVE < ꮟ DIGIT SIX < ꮎ DIGIT SEVEN < ꮜ DIGIT EIGHT < ꮼ DIGIT NINE

8. 'Confusable' characters

Below is a list of Chisoi characters that are 'confusable' with those encoded in other scripts blocks:

ʟ	CHISOI LETTER E	;	ʟ	004C	LATIN CAPITAL LETTER L
ʜ	CHISOI LETTER NA	;	M	004D	LATIN CAPITAL LETTER M
ч	CHISOI LETTER MA	;	ч	0427	CYRILLIC CAPITAL LETTER CHE
ѳ	CHISOI LETTER O	;	Ѳ	0472	CYRILLIC CAPITAL LETTER FITA
४	CHISOI LETTER DDA	;	ড	09A2	BENGALI LETTER DDHA
୫	CHISOI JARAHA	;	ঃ	0983	BENGALI SIGN VISARGA
◌̣	CHISOI SIGN SISO	;	◌্	09CD	BENGALI SIGN VIRAMA
0	CHISOI DIGIT ZERO	;	0	0030	DIGIT ZERO
১	CHISOI DIGIT ONE	;	১	09E7	BENGALI DIGIT ONE
৩	CHISOI DIGIT THREE	;	৩	09E9	BENGALI DIGIT THREE
e	CHISOI DIGIT SIX	;	e	0065	LATIN SMALL LETTER E
ρ	CHISOI DIGIT SEVEN	;	ρ	03C1	GREEK SMALL LETTER RHO
U	CHISOI DIGIT EIGHT	;	U	0055	LATIN CAPITAL LETTER U
ω	CHISOI DIGIT NINE	;	ω	03C9	GREEK SMALL LETTER OMEGA

9. **Acknowledgement**

I would like to thank Jayanta kumar Mahata, Narayan Mahata, Dr. Deborah Anderson, Nurul Alom Ador, Susanta Mahata, All India Kurmali Chisoi-A Society and Kurmali Chisoi-A Teachers' Associations for support on a draft of this proposal and sharing insights on various aspects of encoding Chisoi.

	xxx0	xxx1	xxx2
0	ट xxx00	३ xxx10	0 xxx20
1	ට xxx01	ব xxx11	১ xxx21
2	ৱ xxx02	੦ xxx12	৬ xxx22
3	८ xxx03	ൡ xxx13	൭ xxx23
4	൝ xxx04	३ xxx14	४ xxx24
5	৮ xxx05	੮ xxx15	੨ xxx25
6	L xxx06	খ xxx16	੬ xxx26
7	ਸ xxx07	ল xxx17	੧ xxx27
8	M xxx08	் xxx18	U xxx28
9	੬ xxx09	ৱ xxx19	ൡ xxx29
A	੮ xxx0A	খ xxx1A	
B	ൡ xxx0B	੮ xxx1B	
C	੫ xxx0C	ঃ xxx1C	
D	੪ xxx0D	் xxx1D	
E	੦ xxx0E		
F	੮ xxx0F		

Letters and signs

xxx00 ⸲ CHISOI LETTER A

xxx01 ⸰ CHISOI LETTER BA

xxx02 ⸽ CHISOI LETTER AAI

xxx03 ⸾ CHISOI LETTER AA

xxx04 ꙟ CHISOI LETTER GA

xxx05 ꙟ CHISOI LETTER TA

xxx06 ʟ CHISOI LETTER E

xxx07 ꙭ CHISOI LETTER SA

xxx08 Ꙧ CHISOI LETTER NA

xxx09 ⸲ CHISOI LETTER I

xxx0A ⸲ CHISOI LETTER KA

xxx0B ꙍ CHISOI LETTER RA

xxx0C ꙥ CHISOI LETTER MA

xxx0D ꙣ CHISOI LETTER HA

xxx0E ꙍ CHISOI LETTER RRA

xxx0F ⸲ CHISOI LETTER U

xxx10 ⸲ CHISOI LETTER DA

xxx11 ⸲ CHISOI LETTER LA

xxx12 ꙩ CHISOI LETTER O

xxx13 ꙍ CHISOI LETTER NYA

xxx14 ⸲ CHISOI LETTER NGA

xxx15 ⸲ CHISOI LETTER CA

xxx16 ꙥ CHISOI LETTER JA

xxx17 ꙟ CHISOI LETTER PA

xxx18 ◌̇ CHISOI SIGN ANUSVARA

xxx19 ꙥ CHISOI LETTER YA

xxx1A ⸲ CHISOI LETTER DDA

xxx1B ⸲ CHISOI LETTER TTA

xxx1C ⸲ CHISOI LETTER JARAHA

xxx1D ◌ CHISOI SIGN SISO
   • a consonant vowel-killer

Digits

xxx20 ꙩ CHISOI DIGIT ZERO

xxx21 ꙍ CHISOI DIGIT ONE

xxx22 ꙍ CHISOI DIGIT TWO

xxx23 ꙍ CHISOI DIGIT THREE

xxx24 ꙍ CHISOI DIGIT FOUR

xxx25 ꙅ CHISOI DIGIT FIVE

xxx26 ꙍ CHISOI DIGIT SIX

xxx27 ꙍ CHISOI DIGIT SEVEN

xxx28 ꙍ CHISOI DIGIT EIGHT

xxx29 ꙍ CHISOI DIGIT NINE

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ORG	NEW	ORG	NEW

(Table 2 shows paired glyph comparisons in the Chisoi script between two fonts. The script glyphs are not reproducible as text.)

Table 2: Comparison of Chisoi font 'KurmaliChisoy' drawn by Pankaj Mahato(column 'ORG') and Nurul Alam Ador and Biswajit Mandal's font 'Chisoi'(column 'NEW')

CHISOI	DEV	BEN	ODIA	CHISOI	DEV	BEN	ODIA
ट	अ	অ	ଥ	य	ज	জ	ଜ
ठ	ब	ব	ବ	म	प	প	ପ
ॡ	आइ, ाइ	আই, াই	ଥାଇ, ାଇ	ঁ	ँ	ঁ	ଁ
ट	आ, ा	আ, া	ଥା, ା	य	य	য়	ଯ
ॐ	ग	গ	ଗ	৮	ड	ড	ଡ
২	त	ত	ତ	ट	ट	ট	ଟ
L	ए, े	এ, ে	ଏ, େ	ঃ	N/A	N/A	N/A
म	स	স	ସ	্	্	্	୍
M	न	ন	ନ				
২	इ, ि	ই, ি	ଇ, ି				
ट	क	ক	କ	0	०	০	୦
ঙ	र	র	ର	১	१	১	୧
म	म	ম	ମ	২	२	২	୨
U	ह	হ	ହ	৩	३	৩	୩
৩	ड़	ড়	ଡ଼	৪	४	৪	୪
ट	उ, ु	উ, ু	ଉ, ୁ	৫	५	৫	୫
ঽ	द	দ	ଦ	৬	६	৬	୬
र	ल	ল	ଲ	৮	७	৭	୭
৩	ओ, ो	ও, ো	ଓ, ୋ	U	८	৮	୮
ঙ	ञ	ঞ	ଞ	৬	९	৯	୯
২	ङ	ঙ	ଙ				
ঽ	च	চ	ଚ				

Table 3: Comparison of Chisoi with Devanagari, Bengali and Odia. In Chisoi letter Jaraha is used to make aspirated letters but it is absent in Devanagari, Bengali and Odia.
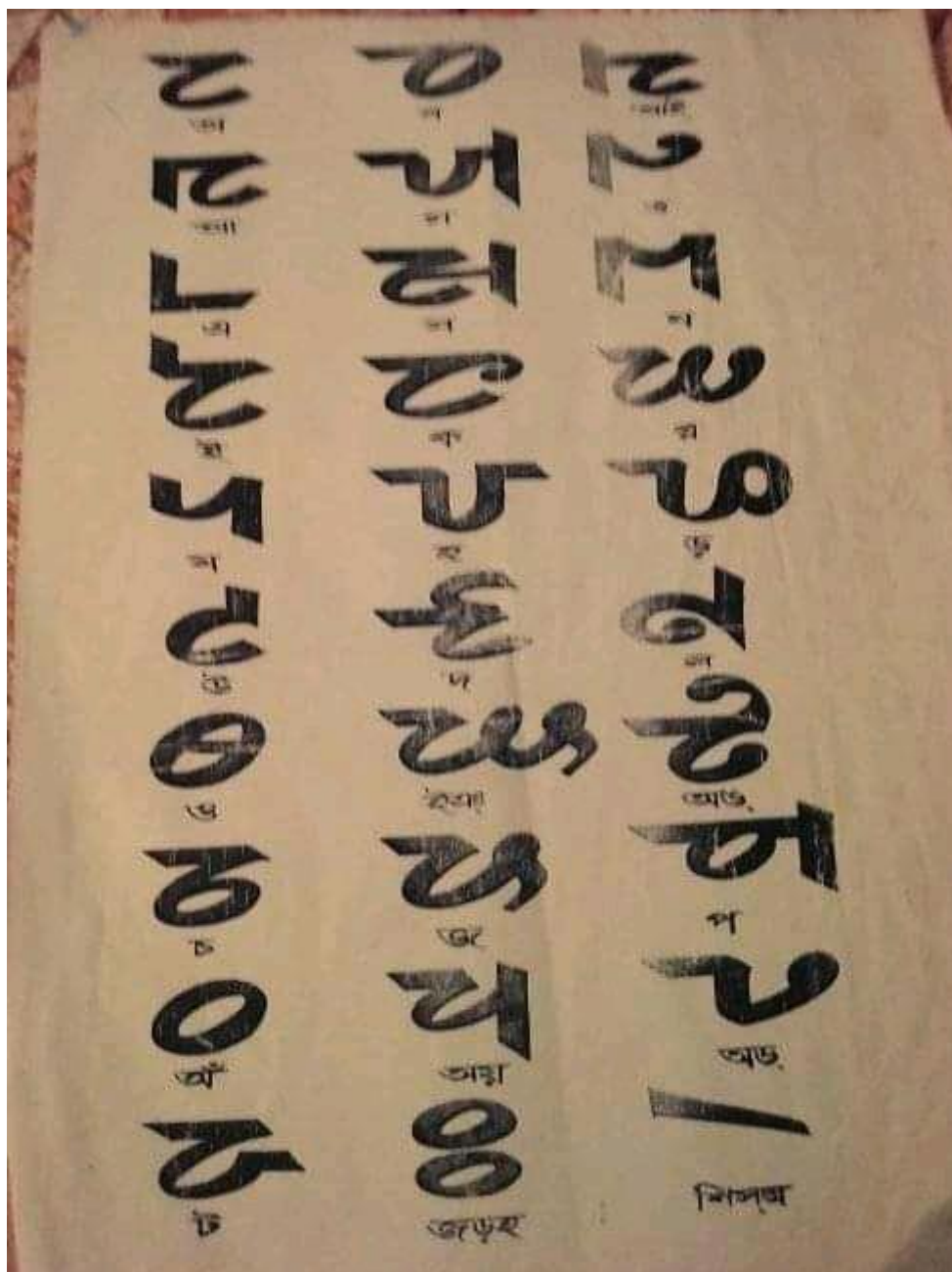
Figure 6: A chart showing letters of Chisoi with Bengali pronunciation from first ever draft of 'Kuṛmāli Cisoi Cinhāp' (1986).

অ
A`

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AA

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J
জ

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অয়

HH
জড়হ

আই
I

ত
TA`

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N

র
R

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RH

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L

NG
অঙ

P
প

D
অড

A″
শিস্অ

১ S

Figure 7: A chart showing letters of Chisoi with Bengali pronunciation from book 'Kuṛmāli Cisoi Cinhāp' চেৎথাৎনৈ ঠৈযৈৎ ঠৈস্থাৎন (for class-I) (15:2009).
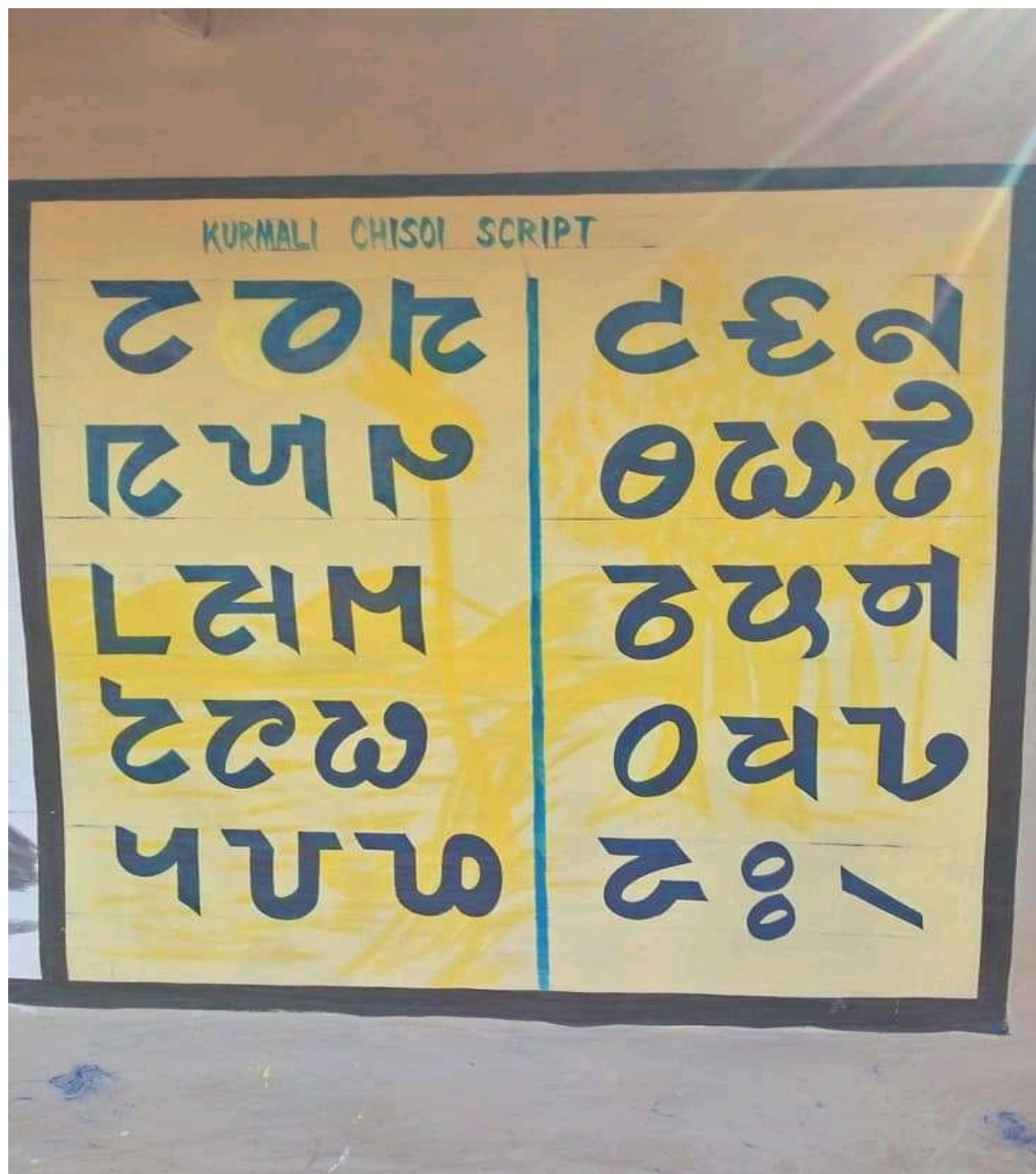
Figure 8: A school wall showing letters of Chisoi (2019).
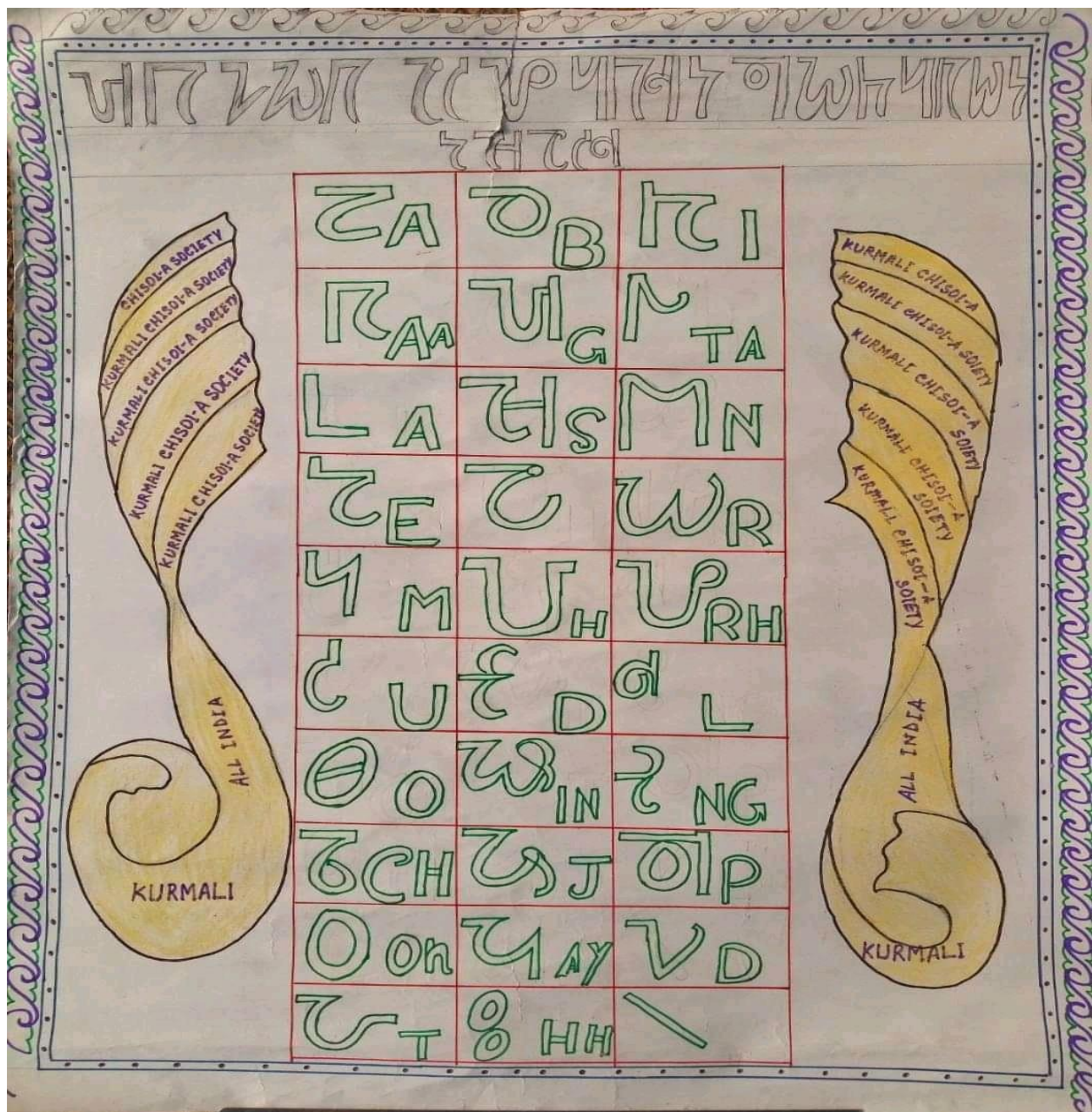
Figure 9: showing chart of Chisoi drawn by a school student.

Figure 10: showing chart of Chisoi and numerals.(courtesy:Facebook)

Figure 11(a): Showing the first edition of Kurmali newspaper 'Āddās' ꞏ𑃢ꞏ (Jun 16th, 2013).

AADDAS

A weekly Kurmali News – cum Literary Magazine 1st Time in India in Chisoi Script

Vol.- 1   Issue-1, 1st December 2016   Rs- 3.00

[Main body text in Chisoi script]

[Caption under photo, in Chisoi script]

[Right column text in Chisoi script, including:] ... 2009 ... Dise Code No 19202302807 |

(Kurmali chisoi chinhap)

[Chisoi script characters chart]

Figure 11(b): Showing the front page of Kurmali newspaper 'Āddās' [Chisoi script] *(Dec 1st, 2016).*

Figure 11(c): Showing the 4th page of Kurmali newspaper 'Āddās' ঢ়ৰৱদ (Dec 16th, 2016).

Figure 11(d): Showing the front page of Kurmali newspaper 'Āddās' ꠝꠧꠗꠞꠝ(Jan 5th, 2017).

(Kurmali chisoi chinhap)

MINORITY (LINGUISTIC)

Message
I am very glad to know that you have invented
a new sciript for kurmali language..........
Many many thanks for the invention of new
script for kurmali-
Dr. H.N.Singh
P.G Deptt. Of Tribal &
Regional languages,
Ranchi University.
Date -14/05/1997

Ami khub anandita Jhargrame Kurmali Chisoia
Writers & Artits Association-er Prachesthai
Kurmali bhasai alochani ber hobe. Aami Assam
prasdesh theke antarik Subhesha janachi aar
bhabisat ujjal kamona kartam.
Monomati Kurmi
Assam Kurmi Mohila Sabha
13 June 2013

Figure 11(e): Showing the 3rd page of Kurmali newspaper 'Āddās' ʀɛɛʈʑʜ with Chisoi chart (Jan 5th, 2017).
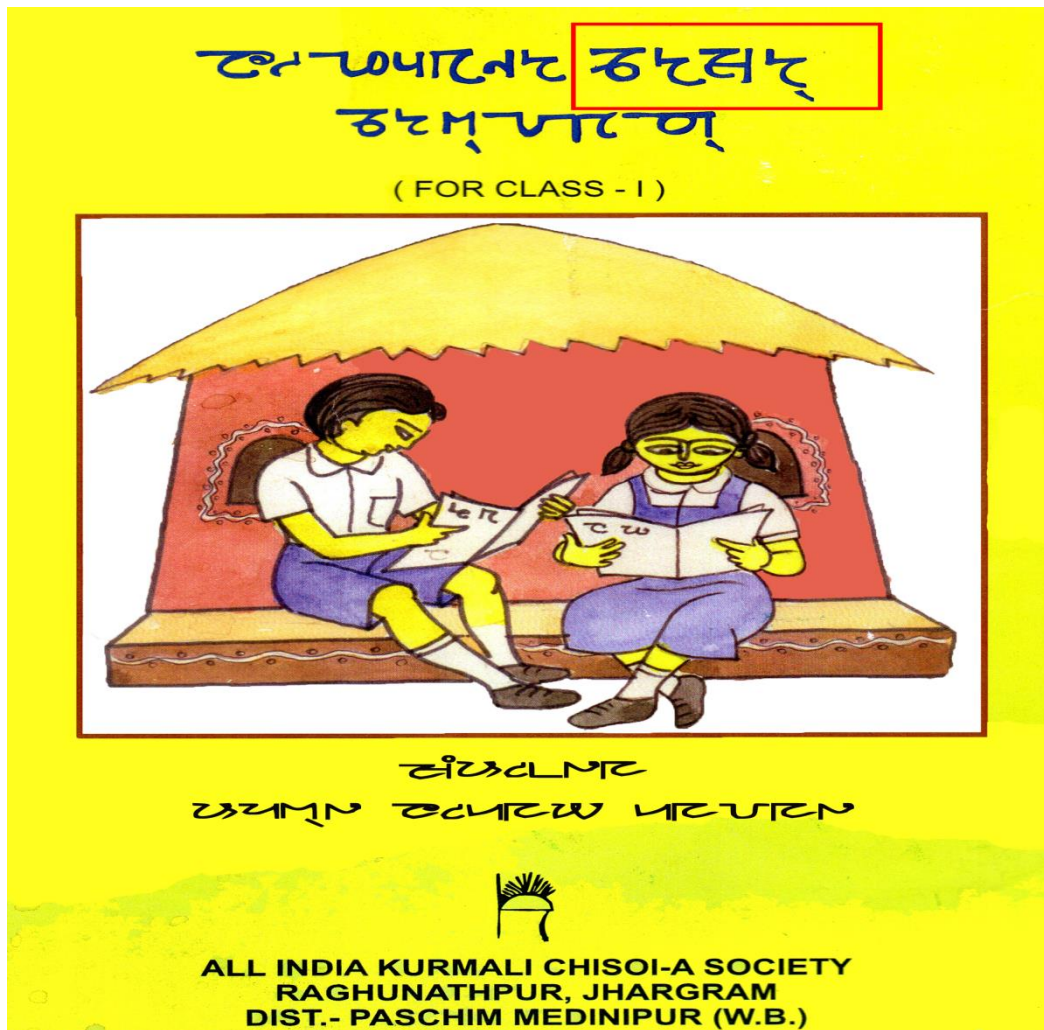
(FOR CLASS - I)

ALL INDIA KURMALI CHISOI-A SOCIETY
RAGHUNATHPUR, JHARGRAM
DIST.- PASCHIM MEDINIPUR (W.B.)

Figure 12: Heading showing the spelling of Chisoi ꗗꗺ(handwritten form)having LETTER I with SISO from the cover of Kurmali primer 'Kuṛmāli Cisoi Cinhāp' ꗗꗺ (for class-I)(2009)

Figure 13: Showing the banner of Kurmali Chisoi-A Teachers' Association'꜒꜖꜒꜖꜒꜖ having kerning issues between two letters.
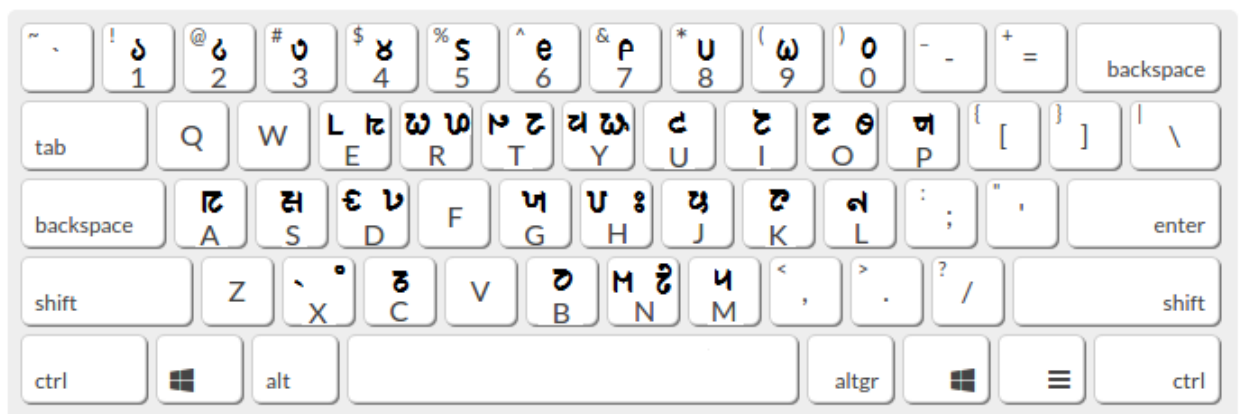
Figure 14: Showing the keyboard layout of new 'Biswa_Chisoi' font (2021).

ESTD-2009

Class – IV   (FINAL EXAMINATION 2018-19)   F.M-50

Subject- Kurmali

Name -

Time – 2 hour Date-4/12/2019

Roll No –

1. [Chisoi script] ?   2

2. [Chisoi script] ?   2

3. [Chisoi script] ?   3

4. [Chisoi script] ?   3

5. [Chisoi script] ?   5

6. [Chisoi script] ?   5

7. [Chisoi script] —   5

[Chisoi]	[Chisoi]
[Chisoi]	
	[Chisoi]
[Chisoi]	
	[Chisoi]
[Chisoi]	

8. [Chisoi script]   10

9. [Chisoi script]   10

10. [Chisoi script]   5

Figure 15: Showing the class 4th annual examination question paper of Kurmali subject from Sonakhuli Kurmali Primary School ESTD-2009(2019).

Figure 16(a): Showing the Chisoi teaching is going on in 'Āṅganwāḍi' Courtyard Shelter school.

Figure 16(b): Showing the picture of Kurmali-Chisoi school from Mayurbhanj, Odisha.

Figure 16(c): Showing the picture of Kurmali-Chisoi school from Chakulia, Jharkhand.
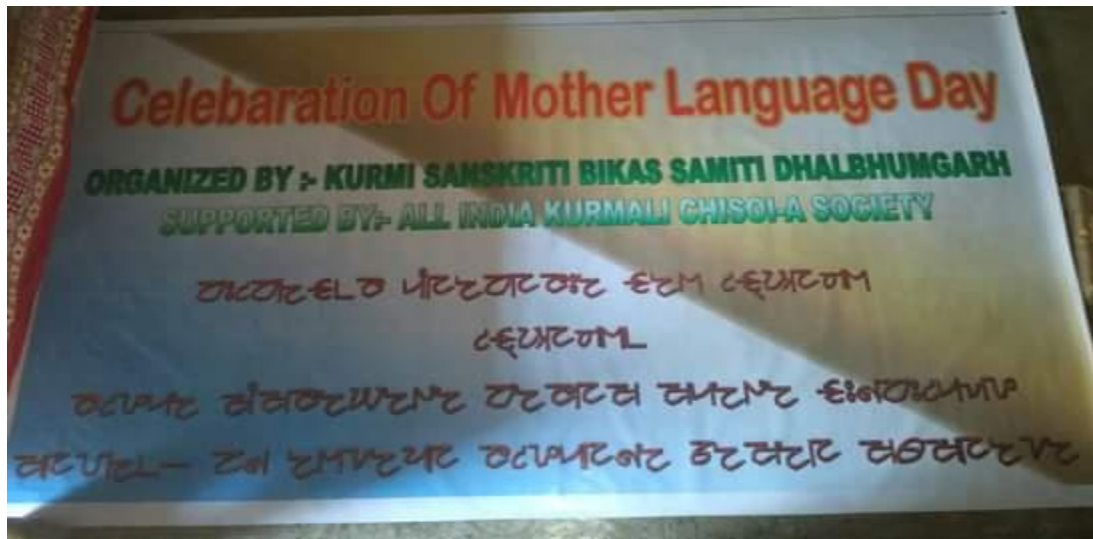
Figure 16(d): A workshop conducted on the occasion of International Mother tongue Day at Dhalbhumgarh, Jharkhand.(2017)

Figure 16(e): Participants list of 'Kurmali Chisoi Chari education and its future aspect' one day workshop at V Pally, Purulia.(2022)
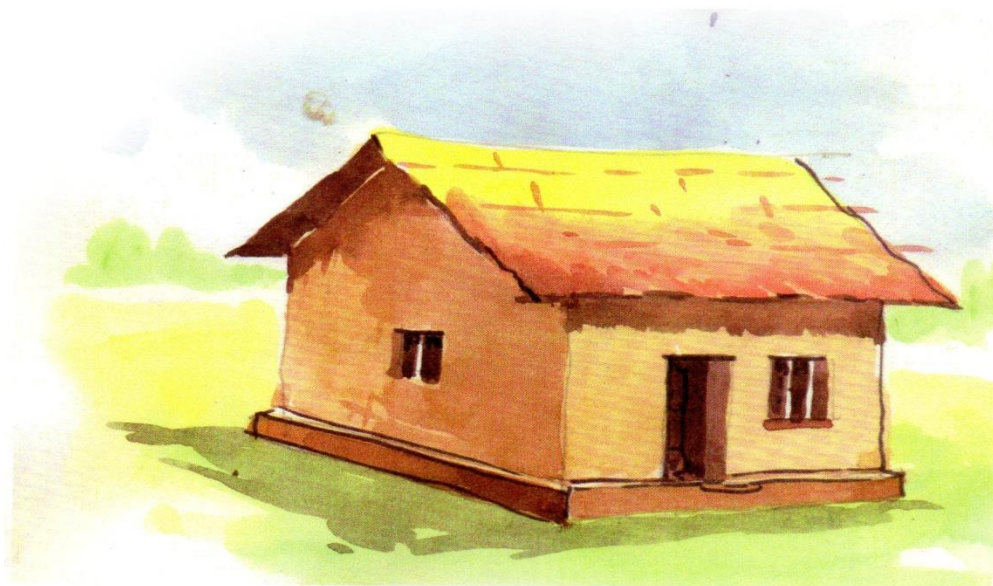
Figure 17: Showing the positioning of Jaraha and siso from book 'Kuṛmāli Cisoi Cinhāp' ᰀᰰᰬ ᰕᰮ (for class-I) (14:2009).

Figure 18: Showing the positing of Chisoi sign Anusvara from book 'Kuṛmāli Cisoi Cinhāp' (for class-I) (13:2009).

ꠐꠌꠢꠣꠞ꠆ꠞ ꠀꠌꠞ ꠌꠣꠞꠔ
(Kurmali Sarha Bhnarhar)

ꠐ [a]—ꠐꠌꠢꠣꠞ꠆ꠞ ꠌꠔꠍꠞ ꠇꠍꠝꠔ ꠌꠣꠐꠈ ꠞꠌꠎꠋ The first letter of the Kurmali chisoi alphabet.

ꠐ [a]—ꠔ. ꠌꠇꠌꠝꠋ ꠌꠇꠞꠔ memorisation

ꠐ[a]—ꠔ. ꠞꠌꠔꠐ ꠌꠇꠞꠔ exclama-tion, —ꠋꠋ ꠌꠞꠝꠔ |

ꠐ [a]—ꠝꠌ ꠝꠌꠞꠔ ꠌꠞꠐꠌꠐ nega-tion. ꠝꠔ |

ꠐ [ah]—ꠝꠌ.ꠎꠌ. yes

ꠐꠐ [ah ba]—ꠝꠌ. ꠇꠞꠌꠞ ꠔꠌꠞꠞꠔ ꠋꠔꠞꠔ ꠌꠞꠌꠝꠞ ꠇꠋꠋꠋꠋꠐ ꠌꠝꠐꠐ ꠈꠊꠇꠞ ꠋꠔꠞꠞ ꠌꠞꠝꠞꠔ ꠌꠇꠔ. ꠞ. ad-dressed between uncle and nephew; ꠌꠝꠐꠐ ꠌꠞꠌꠐꠐ ꠌꠞꠌꠞ |

ꠐꠞꠋꠋꠋ (abganata)— ꠞ. known ꠌꠞꠝꠌꠋ |

ꠐꠞ ꠝꠞꠌꠋ (abgar)—ꠔ.ꠞ.harm ꠌꠞꠝꠌꠋ|

ꠐꠌꠋꠌꠌꠝꠞ (abguina)—ꠝꠌ. having no qualities; ꠌꠞꠌꠋ ꠋꠌꠋ ꠝꠌꠝꠔ |

ꠐꠞꠋꠌꠋ |

ꠐꠞꠋꠞ (abgarh)—ꠝꠌ. Stupid, Worthless ꠝꠌꠝꠔ ꠐꠌꠌꠌꠂ |

ꠐꠞꠋꠌꠌꠝꠌꠞ (abgairhna)—ꠝꠌ.ill shaped;ugly ꠋꠋꠋꠌꠌꠌ ꠌꠌꠌꠐ ꠝꠌꠝꠌ|
ꠐꠞꠝꠌꠋ (abgar)—ꠔ. harm; disser-vice ꠌꠝꠐ |

ꠐꠐꠌꠋ (abas)—ꠝꠌ. unruly; ꠐꠌꠋ ꠌꠇꠞꠔ ꠝꠌꠝꠔ ꠌꠞꠌꠋꠐ uncontroellabla ꠌꠞꠌꠌꠌꠌꠞ |

ꠐꠐꠌꠞꠌꠋ (abais)—ꠝꠌ. certainly; ꠌꠐꠌꠋ ꠝꠌꠌꠌꠋ |

ꠐꠞꠌꠋ (absar)—ꠔ. leisure, respite, ꠋꠌꠋꠝꠌꠋ ꠌꠇꠞꠔ |

ꠐꠞꠌꠞ (abka)—ꠔ. noisy playing or frisking in sport; ꠋꠌꠌ ꠌꠇꠞꠔ ꠌꠌꠝꠌꠐ ꠌꠌꠌꠝꠋ ꠝꠌꠌꠋ ꠞꠋ ꠌꠌꠝꠇ (ꠋꠌꠌꠋꠌꠋ)ꠌꠌꠌꠋ ꠋꠌꠞꠔ ꠋꠋꠋꠋꠋꠋ |

ꠐꠞꠌꠞ (abra)—ꠔ. inactive; im-proper sittine position; ꠋꠌꠌꠌꠋꠌꠞ ꠐꠌꠞ ꠋꠋꠌꠔ |

Figure 19: Showing the front page of Kurmali-English Dictionary 'Kuṛmāli Sāṛābhõāṛār' ꠐꠌꠢꠣꠞ꠆ꠞ ꠌꠞꠌꠌꠞꠂꠞꠌꠌ *(1:2014)*

Figure 20: Showing the logo of 'Sarva Šikṣā Abhiyān' Education for All written in Chisoi (2019).
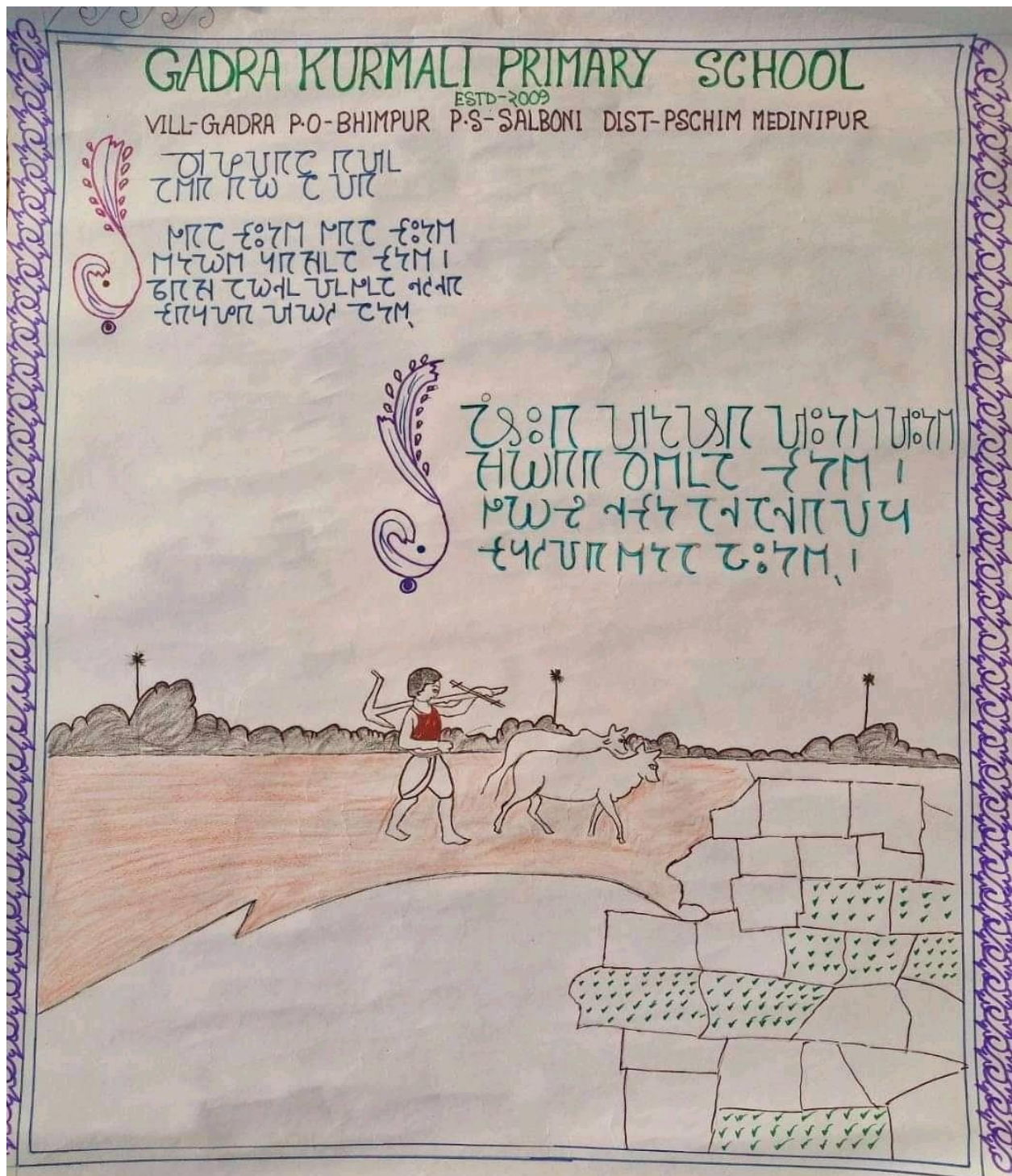
Figure 21: Showing the Kurmali poem chart drawn by a student from Gadra Kurmali primary school.

Figure 22: Showing the school banner and classroom of 'Gādrā Kuṛmāli Pərāimāri Iskul' 𑱐𑱐𑱐𑱐 𑱐𑱐𑱐𑱐𑱐𑱐 𑱐𑱐𑱐𑱐𑱐𑱐𑱐 𑱐𑱐𑱐𑱐*(2009)*
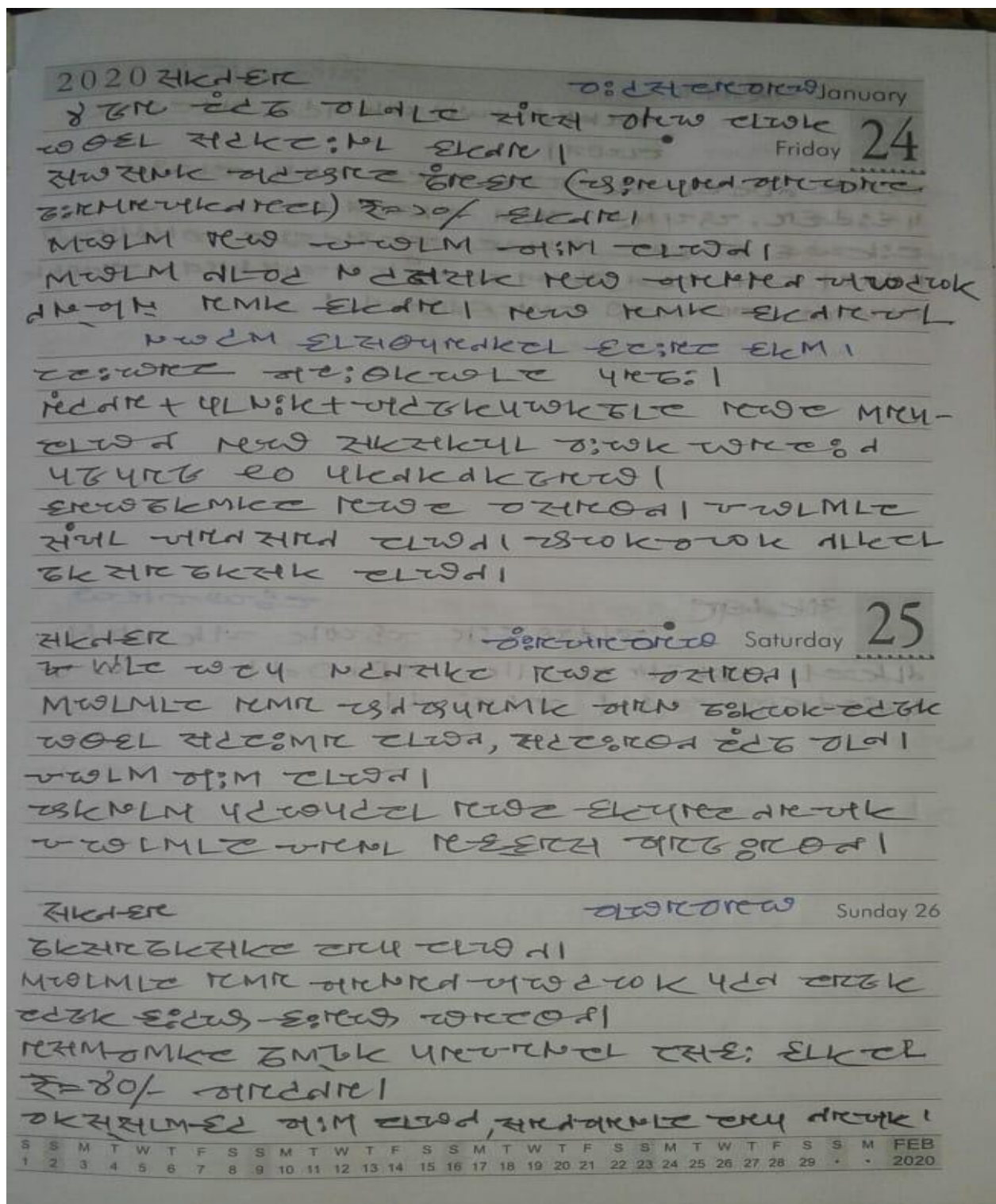
Figure 23(a): Showing the diary maintaining in Chisoi, provided by Narayan Mahata. (2020, Jan)

Figure 23(b): Kurmali poem written in Chisoi, provided by Jayanta Kumar Mahata. (2021)

Figure 24(a): Showing the Chisoi DANDA, DOUBLE DANDA and other punctuation marks from primer 'Kuṛmāli Ô-Bô-Āi Suluk Pūthi' ꠐꠇꠇ (11:2017)

Figure 24(b): Showing the usage of Chisoi DANDA and DOUBLE DANDA from textbook 'Kuṛmāli Sāṛā Bāhār' ꠛꠇ꠨ꠝꠣꠞꠘꠖ ꠢꠣꠔꠥꠞ ꠐꠦꠇꠞ (for class-III). (5:2022)

Figure 25(a): Showing the Chisoi digits from book 'Kuṛmāli Cisoi Cinhāp' ৱেৱমাৱেি ৱৈহই ৱৈহ্যাৱেৰ *class-I, last page (2009).*

Figure 25(b): Showing the Chisoi digits 1-10 from pre-primary book 'Hāmôr Kuṛmāli Cisôi' ᱯᱟᱢᱚ ᱫᱳᱯᱩᱛᱟᱞᱯ ᱫᱯᱟᱛᱯ, *back cover (2022).*

পরম

দুই বাংলার আর বাংলার বাইরের পরমবন্ধুর হদিশ

উপদেষ্টা মণ্ডলী

অনুপম মিশ্র, প্রশান্ত চট্টোপাধ্যায়, জয়া মিত্র, সুখবিলাস বর্মা, জাকির হোসেন, ড. শিশির মজুমদার, সুনীল চন্দ, রুবি পালচৌধুরী, নন্দিতা পালচৌধুরী, হিমাংশু হালদার, রতন বসু মজুমদার, দীপঙ্কর দে, রাজা গুহ, প্রসূন ভৌমিক, অরুপশঙ্কর মৈত্র, শক্তিমান ঘোষ, সুজয় চক্রবর্তী, সৈকত ভট্টাচার্য

পরম বন্ধুরা

মধুমঙ্গল মালাকার, মঞ্জু মালাকার, সুনীল মালাকার, ডমন মুর্মু, গণেশ রবিদাস, ক্ষিরোদাবালা সরকার, ষষ্ঠী জয়সোয়াল, আকুলবালা সরকার, কার্তিক দাস, বাতালু রায়, সাঞ্জুলাল সরকার, তপন সরকার, অশোক রায়, অঞ্জলী রায়, হৃষিকেশ রায় অবিভক্ত দিনাজপুর, নারায়ণ চন্দ্র পৈত দ ২৪ পরগণা, শীতল ফৌজদার বিষ্ণুপুর, গীতা কর্মকার, শিল্পডাঙা বিকনা বাঁকুড়া, শ্যামল মিত্রী, মধু নায়েক, নারায়ণ মাহাত, যতীন মাহাত পশ্চিম মেদিনীপুর, গজেন্দ্র মালাকার, জিতেন বর্মন, নমিতা সরকার, গনাত রাভা, অনিমেষ মালাকার জলপাইগুড়ি, সন্তোষ দে জ্যোৎস্না দে দেওয়ানহাট, দেবব্রত সরকার রসিকবিল কোচবিহার, আশু বাগচী নকশালবাড়ি দার্জিলিং, বিশ্বেন্দু নন্দ, ইন্দুভূষণ নন্দ, বিশ্বেশ্বরী পঞ্চাধ্যায়ী, ড. ললিতা ঘোষ, সৌমিত্র ভট্টাচার্য, তুহিন মুখোপাধ্যায়, ড. সোমা মুখোপাধ্যায়, মৃণাল গোস্বামী কলকাতা, স্বপন মিত্র, আসানসোল আশিস মালাকার বনকাপাসি বিকাশ জয়নাবাদ, দুর্গাপুর, মাণিক সূত্রধর, নতুনগ্রাম বর্ধমান, চন্দ্রশেখর ভট্টাচার্য কোন্নগর হুগলি, মোহন বিশ্বাস উ ২৪ পরগণা, ধর্মেন্দ্র সূত্রধর চড়িদা, নিতাই নন্দী রঘুনাথপুর পুরুলিয়া, পার্থ পঞ্চাধ্যায়ী পূর্ব মেদিনীপুর, বড় বাস্কে বোলপুর সুনীল সরেন রবিন সরেন সিউড়ি সুবল দাস বৈরাগ্য বন্দনগর বীরভূম, হরিপদ বসাক ফুলিয়া নদীয়া, শ্রীনাথ টুডু বিধান টুডু মালদা, অরুণ ভাস্কর মুর্শিদাবাদ এবিএম আনিসুজ্জামান, মো. শাহিনুর রশিদ ঢাকা চন্দন শফিকুল কবীর ইতালি সোফি রিখটার, সুজয় চক্রবর্তী জার্মানি

সম্পাদক

বিশ্বেন্দু নন্দ

সম্পাদকীয় দপ্তর

২৪/১৮, নাবালিয়া পাড়া রোড বড়িষা কলকাতা ৭০০০০৮, ৯৪৭৫২১৩৭৮৮, ০৮৩৩৫০১৪৮০৮ উত্তরবঙ্গ মধুমঙ্গল মালাকার, মুক্তিপুর, বড়গ্রাম দক্ষিণ দিনাজপুর, ৭৩৩১২৮, ০৯৭৩২৩৭০৯৪৬ বাংলাদেশ জাকির হোসেন, বাড়ি নং ৮/১৪, ব্লক বি, লালমাটিয়া ঢাকা ১২০৭, ১১৫৫৮৬৮ lokfolk.blogspot.in, buybengalihandicrafts.blogspot.in, facebook.com/ ourparam, biswendu@yahoo.com

অক্ষরবিন্যাস কলাবতী মুদ্রা ।। ছাপা ইউনিক প্রিন্টার্স ।। পরম মূল্য ২৫ টাকা অঙ্কন: সৌমিত্র ভট্টাচার্য, বিধান বিশ্বাস, গোপী দে সরকার, চন্দন শফিকুল কবীর নামাঙ্কন সৌমিত্র ভট্টাচার্য সংগঠনের জন্য যোগাযোগ বাংলাদেশ, নাগরিক উদ্যোগ, লালমাটিয়া, ঢাকা ।। উত্তরবঙ্গ, মধুমঙ্গল মালাকার

চতুর্থ বছর ।। উনত্রিশ কল্প ।। পৌষ ১৪২৪ ।। ৬

Figure 26: Showing the monthly magazine 'Pôrôm' written in both Kurmali and Bengali (2016).

Figure 27: Cover picture of first ever Kurmali primer of Bangladesh 'Gidôrũenke Kuṛmāli Cisôi' 𑒼𑒚𑒟𑒘𑒾𑒪𑒧𑒇𑒪 𑒇𑒜𑒡𑒪𑒩𑒘𑒇
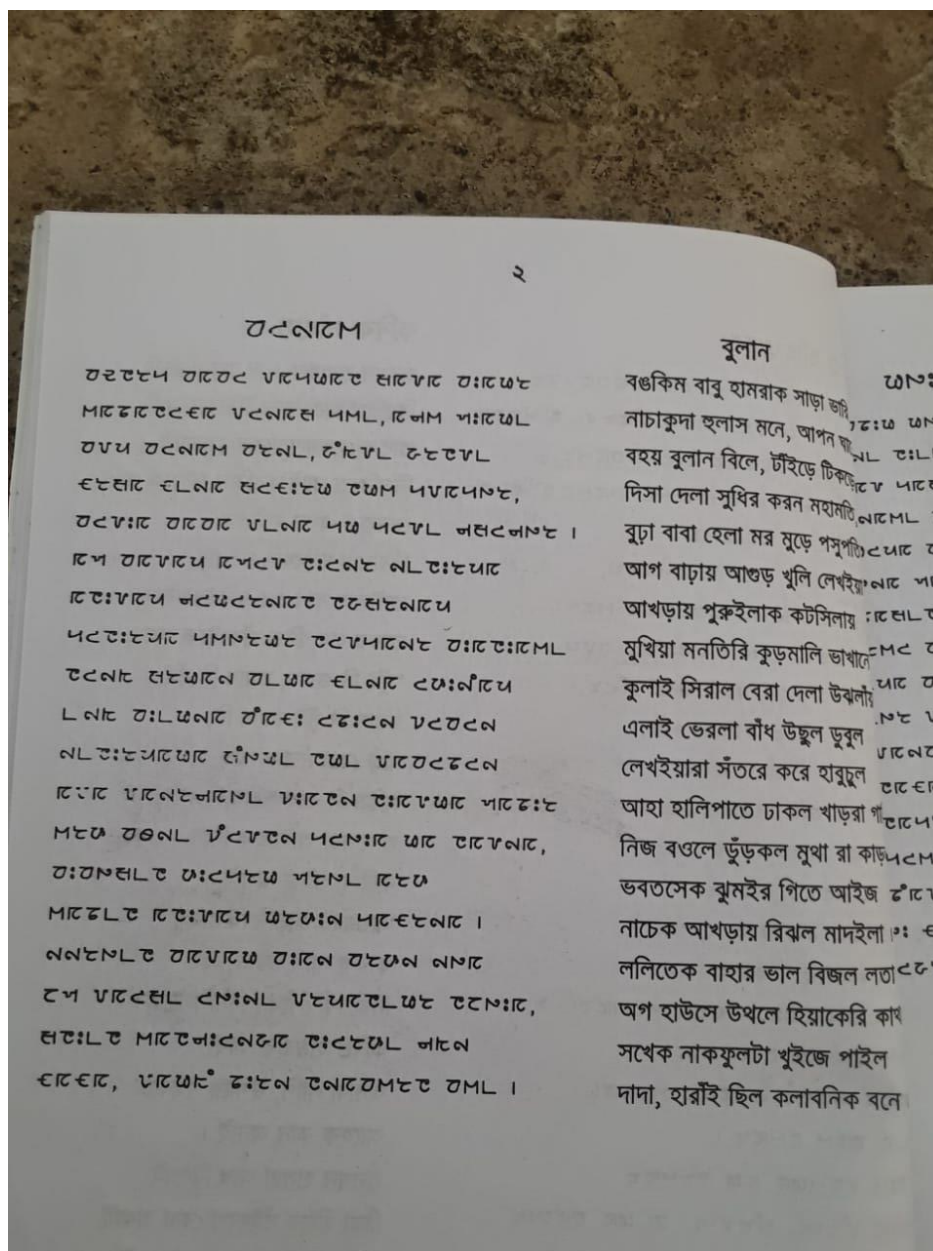
𑒘𑒨𑒇𑒇 *, using the latest font. (2021)*

Figure 28: Showing the first poem of Kurmali book ᱥᱤᱥᱚᱤ 'Bulān' written in both Chisoi and Bengali script (2:2018).
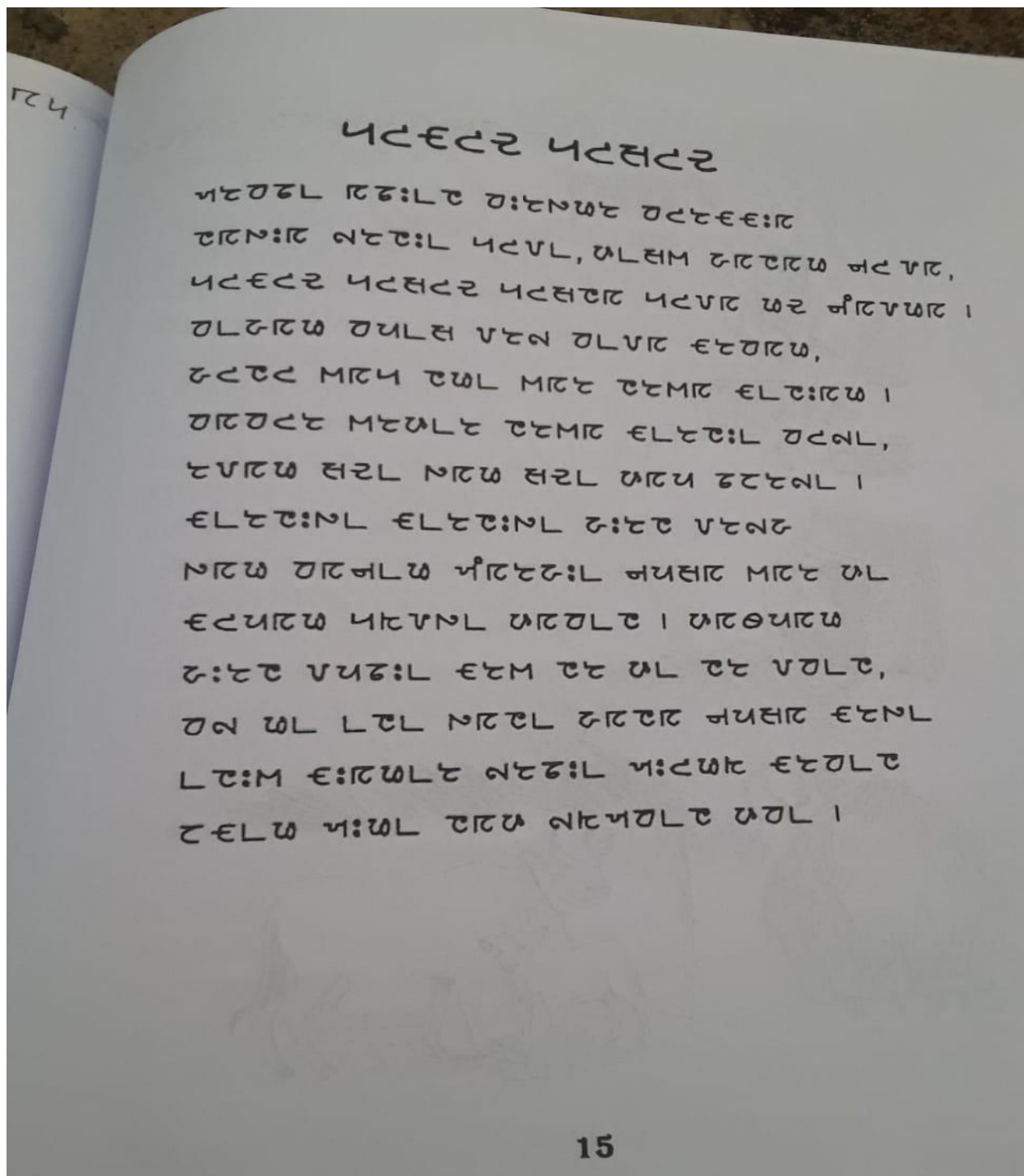
Figure 29: Showing Kurmali poem 'Muduṅ Musuṅ' ᰄᰜᰉᰒᰄᰜᰉᰒ from book 'Kuṛmāli Cāri Disā' ᰅᰉᰤᰣᰉᰔ ᰏᰤᰣ ᰏᰖᰣᰜ (15:2014).

৫ । সারুল পূজা

সারুল পূজাক আইদবাইস
গাঁ গইঠা সভে উপাস ।
থানে নি, পূজা ফুরালে,
চুলহায় নি, আগ সলগে ।
চইত মাসে সারুল পূজা
পইতৃ ঘারে চাঁদা ভেজা ।
ডেহইর ছাঁছাই সালই গুঁজা ।
লইতন পাত লইতন মহল ফুল
ঘারে ঘারে দেবে লায়া
নি, কেরতা ভুল ।
মাটিক হাথি মাটিক ঘড়া
সভে দেতা জড়া জড়া
সাজলন্তৃ হেতা গরাম ঠাকুর
সাল মহলেক গড়া ।
আউয়া চাল কাঁচা দুধ
বেইল তুলসা গুলাজফুর
আর দেতা আবাটা
হেতা পূজা লাল সাঁড়াটা ।
সারুল পূজা থানে হেতা
সালই ফুর সভূ ঘারে জাতা ।
লায়াক মুড়ে গরাম ডালা
সালই ফুরেক লইতন কুলা ।
বইঠা ঢাক বাজাতা
সভে লগ নাচলে রেহতা ।
গরাম ডালা রাখতা লায়া
ঠাকুর পিড়ঁহাক থানে
হরিদ জলে গইড় ধুয়াতা
ঘারেক মাই বহিনে ।
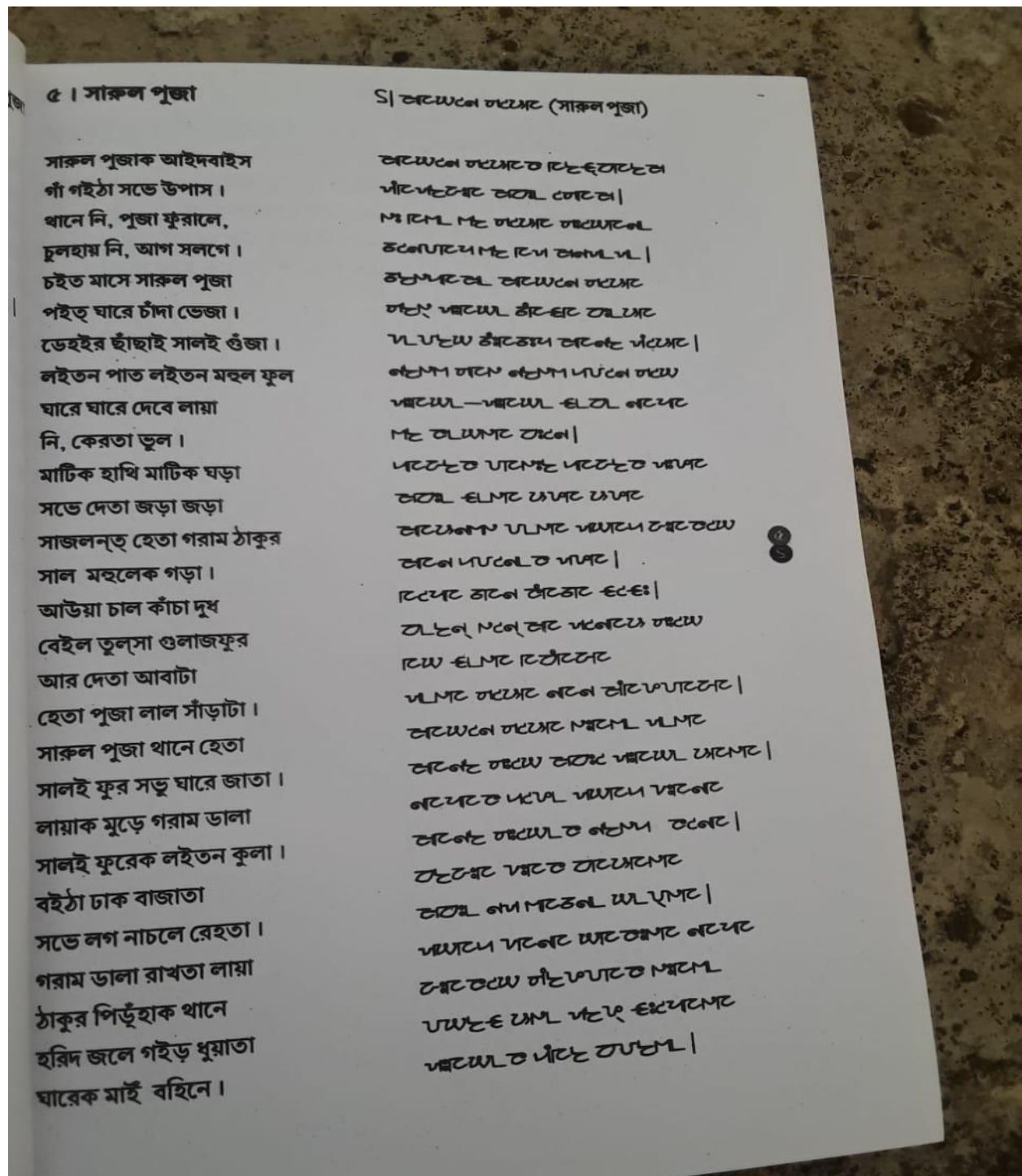
Figure 30: Showing the 5th poem 'Sārul Pujā' written in both Chisoi and Bengali scripts from book 'Cāriceṭhā' (5:2014).

ALL INDIA KURMALI CHISOI SAKSHARATA MISSION

Figure 31: web page of All India Kurmali Shaksharta Mission of Chisoi^ (2021).

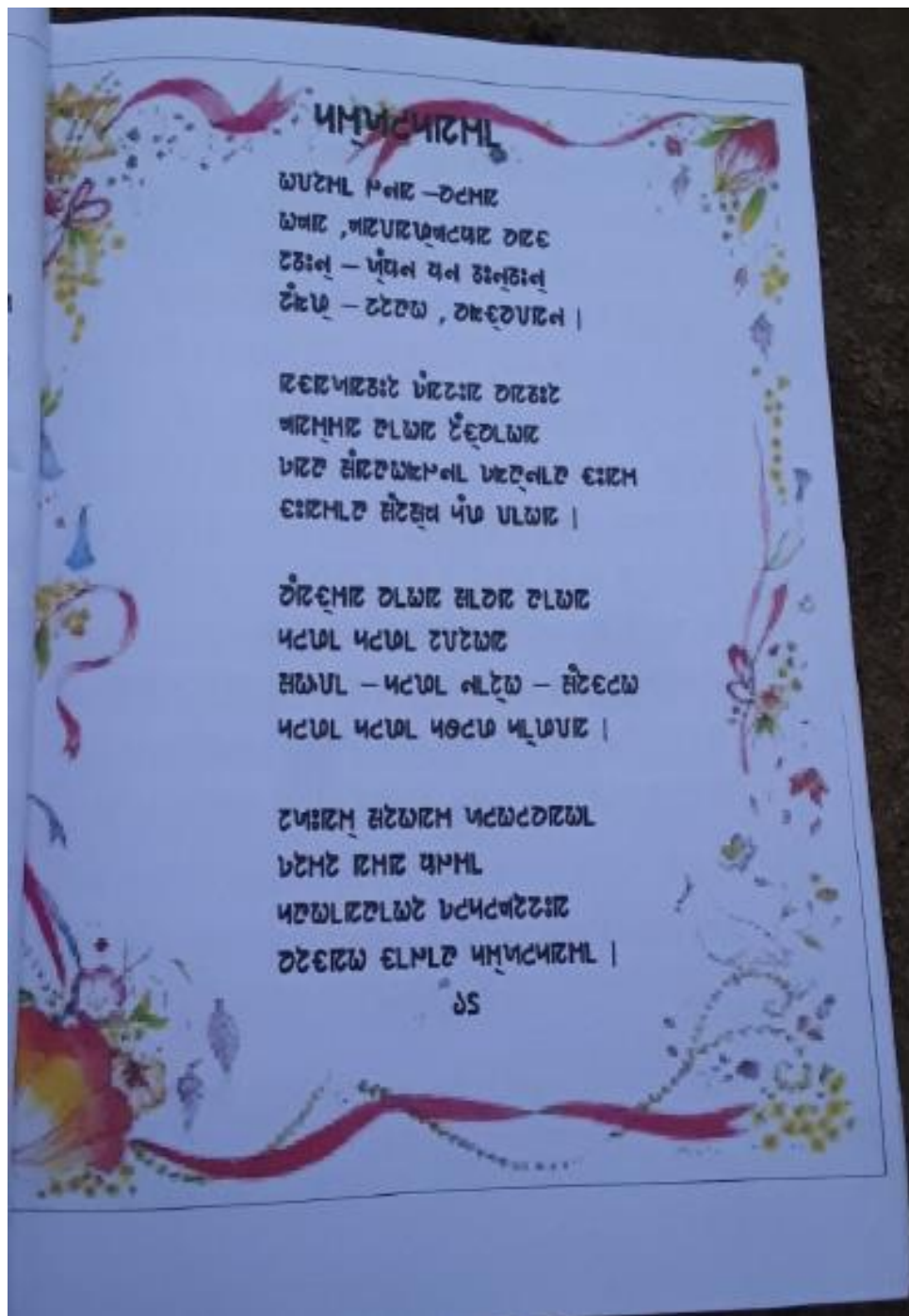*Figure 32: New Banner of 'Sarva Šikṣā Abhiyān' in Chisoi (2021).(courtesy: [Facebook](#))*

Figure 33: Extracted from textbook *'Kuṛmāli Sāṛā Bāhār'* ꠩꠆ꠇ (for class-III) (13:2022).

Figure 34: Extracted from textbook 'Kuṛmāli Sāṛā Bāhār' ꠞꠌꠥꠝꠣꠟꠤ ꠡꠣꠠꠣ ꠛꠣꠢꠣꠞ (for class-IV) (16:2022)

Figure 35: Extracted from textbook 'Kuṛmāli Sāṛā Bāhār' (for class-IV) (37:2022)

ᴅᴄᴠᴜᴋᴄᴧᴄ ᴈᴄᴈᴧᴢᴢ–ᴦ ᴠᴧᴈᴄᴡᴈ ʟᴈᴆᴈᴢʟᴈᴍ

KURMALI CHISOI-A TEACHERS' ASSOCIATION
Regd.No.- S0005660 of 2019-2020
Head Office
BAMUNDIHA :: P.O.- TULIBARH :: P.S.- JAMBONI:: DIST.- JHARGRAM:: PIN -721503
Phone No. :- 8945041514/9734435098 :: Email Ld:- kurmalichisoiateachers@gmail.com

Ref: 07/2021   Date :-27/07/2021

To
 Dr. Deborah Anderson
Unicode Technical Director
Unicode Technical Committee, USA

Subject: Support application for "Proposal to Encode Chisoi in Universal Character set.

Dear Madam,
        In reference to the above subject it is to inform that Kurmali Chisoi-a Teachers' Association is the Leading organization of Kurmali- Chisoi-a Linguistic Community of India now . It is a non-profitable organization . The main objective of this organization is to preserve and propagate Kurmali Language and Kurmali culture scientifically among Kurmi people and many other people like Rajwar, Dhopa, Napit, Kamar, Kumore etc. Many of them use Kurmali Language in their day to day lives and they all belong to Kurmali Linguistic community. More than 50 Lakh of people of India Use Kurmali Language. There are also Kurmali speaking people in Bangladesh and Nepal. Now thousands and   thousands of people use the Chisoi Script to write Kurmali language . There are many Kurmali Chisoi- Medium primary schools in West Bengal of India which had been registered by the SSM 'Samagra Siksha Mission' Education Mission of Govt. of India. Now Kurmali is a recognized language in the state of West Bengal and Jharkhand.

The History of Chisoi script
   The Chisoi is one kind of Alphabetic Script. It was created by Jayanta Kumar Mahata in 1986, a linguist of West Bengal. It is nothing but the sumtotal of some religious and cultural symbols of Kurmali Cultural Community. The symbols have been logically and scientifically arranged in the Chisoi. It is used to write Kurmali Language. Several books and a weekly newspaper have been published in the Chisoi Alphabet . There are forty characters (8 vowels,20 Consonants , 2 signs and 10 digits) in the Chisoi Alphabet. Pankaj Kumar Mahata of Jhargram, an engineer designed a digitized true type font in the year 2000 first. It has been widely used by the Kurmali Chisoi-a Community. Another true type font was designed by Biswajit Mandal and Nurul Alam Ador for chisoi in 2021. It is easier to use . So it has been also accepted by the Kurmali Chisoi-a Community. Now it is used to write Kurmali Language . After thirty four years journey (Debate, discussion, work-shop, seminar etc,) Chisoi is a popular script among Kurmali Linguistic Community.

So, our humble request to Unicode Committee to Encode our Chisoi Script as soon as possible for smooth development of the Kurmali Language.

Yours sincerely
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(SUSANTA MAHATA)
President / Secretary
KURMALI CHISOI - A TEACHER'S
ASSOCIATION

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ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646TP 1 PT
Please fill all the sections A, B and C below.
Please read Principles and Procedures Document (P & P) from HTUhttp://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html UTH **for guidelines and details before filling this form.**
Please ensure you are using the latest Form from HTUhttp://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.htmlUTH**.**
See also HTUhttp://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html UTH **for latest *Roadmaps*.**

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A. Administrative

1. **Title:**	*Proposal to Encode the Chisoi in Universal Character Set*
2. Requester's name:	*Biswajit Mandal (biswajitmandal.bm90@gmail.com)*
3. Requester type (Member body/Liaison/Individual contribution):	*Individual Contribution*
4. Submission date:	*11/09/2022*
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	*Yes*
(or) More information will be provided later:	*No*

B. Technical – General

1. Choose one of the following:
   - a. This proposal is for a new script (set of characters):   *Yes*
     - Proposed name of script: *Chisoi*
   - b. The proposal is for addition of character(s) to an existing block:
     - Name of the existing block:
2. Number of characters in proposal: *40*
3. Proposed category (select one from below - see section 2.2 of P&P document):

A-Contemporary	X	B.1-Specialized (small collection)		B.2-Specialized (large collection)
C-Major extinct		D-Attested extinct		E-Minor extinct
F-Archaic Hieroglyphic or Ideographic			G-Obscure or questionable usage symbols	

4. Is a repertoire including character names provided?   *Yes*
   - a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?   *Yes*
   - b. Are the character shapes attached in a legible form suitable for review?   *Yes*
5. Fonts related:
   - a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?
     - *Biswajit Mandal (biswajitmandal.bm90@gmail.com)*
   - b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):
     - *Biswajit Mandal (biswajitmandal.bm90@gmail.com)*
6. References:
   - a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?   *Yes*
   - b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?   *Yes*
7. Special encoding issues:
   - Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?   *Yes*
     - *See proposal for additional details*

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at HTUhttp://www.unicode.orgUTH for such information on other scripts. Also see Unicode Character Database (Hhttp://www.unicode.org/reports/tr44/) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?   *No*

    If YES explain

2. Has contact been made to members of the user community (for example: National Body,

    user groups of the script or characters, other experts, etc.)?   *Yes*

        If YES, with whom?   *Jayanta Kumar Mahata, Narayan Mahata, Bikash Mahata, Amalendu Mahata, Susanta Mahata, etc*

        If YES, available relevant documents: *See citations in text proposal*

3. Information on the user community for the proposed characters (for example:

    size, demographics, information technology use, or publishing use) is included?   *Yes*

    Reference: *See text of proposal*

4. The context of use for the proposed characters (type of use; common or rare)   *Common*

    Reference: *See text of proposal*

5. Are the proposed characters in current use by the user community?   *Yes*

    If YES, where? Reference: *See text of proposal*

6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely

    in the BMP?   *No*

        If YES, is a rationale provided?

        If YES, reference:

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?   *Yes*

8. Can any of the proposed characters be considered a presentation form of an existing

    character or character sequence?   *No*

        If YES, is a rationale for its inclusion provided?

        If YES, reference:

9. Can any of the proposed characters be encoded using a composed character sequence of either

    existing characters or other proposed characters?   *No*

        If YES, is a rationale for its inclusion provided?

        If YES, reference:

10. Can any of the proposed character(s) be considered to be similar (in appearance or function)

    to, or could be confused with, an existing character?   *No*

        If YES, is a rationale for its inclusion provided?

        If YES, reference:

11. Does the proposal include use of combining characters and/or use of composite sequences?   *No*

    If YES, is a rationale for such use provided?

        If YES, reference:

    Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

        If YES, reference:

12. Does the proposal contain characters with any special properties such as

    control function or similar semantics?   *No*

        If YES, describe in detail (include attachment if necessary)

13. Does the proposal contain any Ideographic compatibility characters?   *No*

    If YES, are the equivalent corresponding unified ideographic characters identified?

        If YES, reference: