National Biodiversity Centre
Ministry of Agriculture & Livestock
Royal Government of Bhutan

Material Transfer Agreement

Reference No: NBC/ BRD/7/2024-2025/151

Article 1 – Parties to the Agreement

1.1 This Agreement is made between:

National Biodiversity Centre (NBC), Ministry of Agriculture and Livestock (MoAL), Serbithang, Thimphu, Post Box No. 875. ***(National Focal for Access to Genetic Resources and execution of Material Transfer Agreement)***.

Applicant: Mr. Choki Dorji, bearing CID number: 11105003450, Associate Lecturer, Centre for Bhutan & GNH Studies, currently a Master's Student at the Laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Japan (hereinafter referred to as "Applicant").

And

Recipient: Dr. Yasir Serag Alnor Mohammed Serag Alnor, bearing Passport No: P10747650, Associate Professor, Laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Tel: 075-753-6045, Japan (hereinafter referred to as "Recipient").

Article 2 – Preamble

2.1 The Material Transfer Agreement is executed in fulfillment of Article 5 of Section 92 of the Biodiversity Act of Bhutan 2022 and based on the National Biodiversity Centre's approval note-sheet No: NBC/BRD/7/2026-2027/**150** dated **21 August 2026.**

2.2 The Competent National Authority (CNA) for this Agreement is an authority established by section 13 of the Biodiversity Act of Bhutan 2022 responsible for the approval of the access proposal based on the recommendation of the National Focal Point.

2.3 The Applicant and the Recipient acknowledge that the Royal Government of Bhutan (hereinafter referred to as RGoB) retains legal ownership of the Material. The Applicant is authorized to transfer to the Recipient the Material specified under Article 4 of this agreement upon execution of this Material Transfer Agreement (MTA) between the Applicant and the Recipient.

2.3 The Applicant and Recipient shall jointly be referred to as "Parties".

Article 3– Definitions

3.1 In this Agreement the expression set out below shall have the following meaning:

"Material" shall mean 67 number of accessions of wheat currently conserved at the National Plant Genebank, NBC, any biological materials and derivatives derived from them, together with the information provided therewith as mentioned in article 4.1 of this Agreement.

Initial Applicant

NATIONAL BIODIVERSITY CENTRE * SERBITHANG * MINISTRY OF AGRICULTURE & LIVESTOCK

Initial NBC

Initial Recipient

"Applicant" means the person/institution providing the material and for this agreement, Mr. Choki Dorji, Associate Lecturer, Centre for Bhutan and GNH Studies, currently a Master's Student at the Laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Japan.

And

"Recipient" means the person receiving the material and for this agreement, Dr. Yasir Serag Alnor Mohammed Serag Alnor, Associate Professor, Laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Tel: 075-753-6045, Japan.

Article 4 - Subject Matter of the Material Transfer Agreement

4.1 67 number of accessions of wheat currently conserved at the National Plant Genebank, NBC, any biological materials and derivatives derived from them, together with the information provided therewith are hereby transferred from the Applicant to the Recipient subject to the terms and conditions set out in this Agreement. Details are as follows:

Sl No	Acc no	Crop Name	Gewog Name	Dzongkhag Name	Altitude	Weight
1	29	Wheat	Dogar	Paro	2620	7 gm
2	63	Wheat	Sampheling	Chhukha	603	7gm
3	71	Wheat	Naja	Paro	2700	7gm
4	170	Wheat	Lauri	Samdrup Jongkhar	1523	7gm
5	320	Wheat	Geney	Thimphu	2746	7gm
6	358	Wheat	Chang	Thimphu	2314	7gm
7	371	Wheat	Mewang	Thimphu	2667	7gm
8	384	Wheat	Tsento	Paro	2500	7gm
9	488	Wheat	Goenkhamae	Gasa	2300	7gm
10	720	Wheat	Zobel	Pema Gathsel	1960	7gm
11	827	Wheat	Geney	Thimphu	2800	7gm
12	894	Wheat	Yurung	Pema Gathsel	1441	7gm
13	1118	Wheat	Yurung	Pema Gathsel	1410	7gm
14	1119	Wheat	Sephu	Wangdue Phodrang	2750	7gm
15	1120	Wheat	Bjena	Wangdue Phodrang	2389	7gm
16	1121	Wheat	Kabjisa	Punakha	1323	7gm
17	1122	Wheat	Bjee	Haa	3000	7gm
18	1123	Wheat	Shenga Bjime	Punakha	1282	7gm
19	1124	Wheat	Tendruk	Samtse	1590	7gm
20	1125	Wheat	Bjena	Wangdue Phodrang	2389	7gm
21	1126	Wheat	Dangchu	Wangdue Phodrang	2400	7gm
22	1127	Wheat	Daga	Wangdue Phodrang	963	7gm
23	1252	Wheat	Bjee	Haa	3200	7gm
24	1253	Wheat	Bjee	Haa	3200	7gm
25	1254	Wheat	Dungna	Chhukha	1200	7gm
26	1255	Wheat	Chapcha	Chhukha	2577	7gm
27	1256	Wheat	Chhoekhor	Bumthang	2780	7gm
28	1257	Wheat	Bjee	Haa	3200	7gm

Initial Applicant

NATIONAL BIODIVERSITY CENTRE * SERBITHANG * MINISTRY OF AGRICULTURE & LIVESTOCK, THIMPHU

Initial NBC

Initial Recipient

29	1258	Wheat	Eusu	Haa	3000	7gm
30	1259	Wheat	Eusu	Haa	3117	7gm
31	1260	Wheat	Samar	Haa	2764	7gm
32	1401	Wheat	Thedtsho	Wangdue Phodrang	1200	7gm
33	1462	Wheat	Toebisa	Punakha	2129	7gm
34	1464	Wheat	Toewang	Punakha	1255	7gm
35	1479	Wheat	Lingmukha	Punakha	1972	7gm
36	1492	Wheat	Talo	Punakha	1972	7gm
37	1493	Wheat	Goenshari	Punakha	1922	7gm
38	1516	Wheat	Toebisa	Punakha	2129	7gm
39	1517	Wheat	Samar	Haa	3119	7gm
40	1518	Wheat	Tang	Bumthang	2780	7gm
41	1519	Wheat	Toewang	Punakha	1900	7gm
42	1520	Wheat	Toewang	Punakha	1900	7gm
43	1601	Wheat	Toewang	Punakha	1399	7gm
44	1602	Wheat	Bjee	Haa	3200	7gm
45	1603	Wheat	Eusu	Haa	3117	7gm
46	1604	Wheat	Eusu	Haa	3000	7gm
47	1605	Wheat	Bjee	Haa	3000	7gm
48	1685	Wheat	Goenkhatoe	Gasa	2200	7gm
49	1876	Wheat	Chali	Mongar	1850	7gm
50	2100	wheat	Trong	Zhemgang	1550	7gm
51	2171	Wheat	Katsho	Haa	2745	7gm
52	2172	wheat	Bjee	Haa	2960	7gm
53	2173	Wheat	Katsho	Haa	2740	7gm
54	2457	Wheat	Kazhi	Wangdue Phodrang	2025	7gm
55	2642	Wheat	Nubi	Trongsa	2648	7gm
56	2878	Wheat	Tsendagang	Dagana	852	7gm
57	3028	Wheat	Dungna	Chhukha	1300	7gm
58	3043	Wheat	Naja	Paro	2564	7gm
59	3044	Wheat	Naja	Paro	2564	7gm
60	3087	Wheat	Phobjikha	Wangdue Phodrang	3120	7gm
61	3225	Wheat	Kangpara	Trashigang	1933	7gm
62	3323	Wheat	Bongo	Chhukha	1399	7gm
63	3746	Wheat	Thedtsho	Wangdue Phodrang	1210	7gm
64	3837	Wheat	Lungnyi	Paro	2734	7gm
65	3838	Wheat	Samar	Haa	2493	7gm
66	3880	Wheat	Bongo	Chukha	2482	7gm
67	3916	Wheat	Bongo	Chukha	2518	7gm

Article 5 – Destination

5.1 The destination of the material shall be the research sites at the College of Natural Resources, Royal University of Bhuta, Kazhi Gewog and Samphelling Research Centre. The DNA

Initial Applicant

NATIONAL BIODIVERSITY CENTRE ★ SERBITHANG ★ MINISTRY OF AGRICULTURE & LIVESTOCK, THIMPHU

Initial NBC

Initial Recipient

samples will be later taken to the Laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Japan under a separate MTA.

Article 6 -Terms and Conditions

6.1 The Applicant and Recipient undertake that the transferred Material shall be used only to support Master's research titled "The Changes in the Genetic and Agronomic Trait Diversity of Bhutanese Wheat." of Mr. Choki. The study will conduct a comparative analysis with the historical accessions (originally collected in the 1950s by Dr. Sasuke Nakao) held at Kyoto University. Experiments will be carried out under Bhutanese growing conditions at three sites (College of Natural Resources, Lobesa; Kazhi Gewog, Wangdue Phodrang; and Samphelling Research Centre) to characterize changes in genetic diversity and agronomic traits over recent decades and establish a critical evolutionary baseline for Bhutan's agricultural genetic heritage. It shall not venture into biodiscovery research including testing of chemical constituents, and in case of a change of intent, the Recipient and the Applicant shall seek prior written approval from the CNA.

6.2 The Applicant and Recipient shall take full responsibility for the safety and protection of the Material and shall be liable for any misuse by any third party. The Material shall not be transferred, disclosed, or made accessible to any third party without the prior written approval of the CNA

6.3 The transferred materials after the completion of the study, together with the 108 historical accessions (originally collected in the 1950s by Dr. Sasuke Nakao) held at Kyoto University shall be deposited to National Plant Genebank, Bhutan after the successful completion of the study for long-term conservation.

6.4 If the Material is referred to in any publication by the Applicant and Recipient, correct reference shall be made by citing the MTA number generated after the signing of this agreement.

6.5 Subject to journals' regulations on co-authorship and active participation in publications, the Applicant, Recipient and relevant officials involved in the study shall be included in the joint authorship of any publication resulting from this study.

6.6 DNA extraction shall be performed solely at the CNR laboratory as agreed and only dried, non-viable DNA pellets transferred to the Laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Japan for molecular analysis which shall be governed by a separate MTA at the time of actual transfer of the DNA samples.

6.7 The Recipient and the Applicant shall submit a progress report to the CNA through NBC on or before 31st May 2027, being the date of expiry of this Agreement. Upon completion of the study, the Recipient and the Applicant shall submit a final technical report, including all study findings and any confidential information prior to publication, to the NBC. If the study cannot be completed within the validity period of this Permit, the Recipient and the Applicant shall submit a written request for an extension to the CNA through the NBC, together with a progress report and justification for the extension, at least thirty (30) days before the expiry of the Agreement.

Initial Applicant

NATIONAL BIODIVERSITY CENTRE ★ MINISTRY OF AGRICULTURE & LIVESTOCK, THIMPHU ★
Initial NBC
SERBITHANG

Initial Recipient

6.8 It is the responsibility of the Recipient and Applicant to bring to the notice of relevant authorities of the Laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Japan, CNR, Samphelling Research Centre about the conditions set in the agreement and the usage of the transferred Material.

6.8 In case of new discovery (ies), the Recipient and the Applicant shall inform CNA through NBC of such discovery (ies) immediately without fail and shall not venture into any commercialization activities without prior approval of the CNA.

6.9 In case of new discoveries, the Recipient and the Applicant shall not apply for any intellectual property rights without prior written approval from the CNA. CNA, Applicant and Recipient shall jointly negotiate the ownership and benefit-sharing mechanism arising from the use of the intellectual property rights according to the Access and Benefit Sharing Legislations of the Kingdom of Bhutan.

6.10 NBC makes no warranties as to the accuracy of any passport or other data provided with the Material. Neither does it make any warranties as to the quality, or purity (genetic or mechanical) of the Material being supplied.

6.11 The Recipient assumes full responsibility for complying with the counterpart nation's quarantine and biosafety regulations and rules as to the import of the Material.

Article 7 – Settlement

7.1 The Parties shall discuss sincerely and settle amicably on matters which are not stipulated in this Agreement or interpretation of this Agreement.

7.2 This Agreement shall be governed by and construed in accordance with the laws of Bhutan.

Article 8 – Signature and Acceptance

In conformity with the above terms and conditions, the parties have executed this Material Transfer Agreement on the dates set forth below.

For the National Biodiversity Centre:

Seal & Signature [_____] **Date**: 25 August 2026

Program Director
National Biodiversity Centre
Serbithang

Name: Dr. Karma Dema Dorji

Designation: Program Director

Mailing Address: National Biodiversity Centre, Ministry of Agriculture and Livestock, Serbithang, Thimphu, Post Box No. 875

For the Applicant: I, **Choki Dorji**, represent and warrant that I have the authority to execute this Agreement on behalf of the Applicant.

Initial Applicant

NATIONAL BIODIVERSITY CENTRE * SERBITHANG * MINISTRY OF AGRICULTURE & LIVESTOCK, THIMPHU

Initial NBC

Initial Recipient

Seal & Signature [ ] **Date**: 25 August 2026

Name: Mr. Choki Dorji

Designation: Associate Lecturer/M.Sc. Student

CID Number: 11105003450

Mailing Address: Laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Japan. Email: chokidorji@moal.gov.bt

For the Recipient: I, **Dr. Yasir Serag Alnor Mohammed Serag Alnor,** represent and warrant that I have the authority to execute this Agreement on behalf of the Recipient and acknowledge to abide by the provisions of this Agreement, both by letter and in principle, in order to promote the conservation and sustainable use of biological resources and sharing of benefits derived thereof.

Seal & Signature [ ] **Date**: 25 August 2026

Name: Dr. Yasir Serag Alnor Mohammed Serag Alnor

Designation: Associate Professor

Passport Number: P10747650

Mailing Address: [redacted] laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Japan. Tel: 075-753-6045, Email: seragalnor.yasir.5x@kyoto-u.ac.jp

Initial Applicant

NATIONAL BIODIVERSITY CENTRE ★ SERBITHANG ★ MINISTRY OF AGRICULTURE & LIVESTOCK, THIMPHU

Initial NBC

Initial Recipient

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ROYAL GOVERNMENT OF BHUTAN

Ministry of Agriculture and Livestock

National Biodiversity Centre

Serbithang: Thimphu, Bhutan

SAMPLE TRANSFER CERTIFICATE

(Certificate of Origin for Genetic Resources)

NBC/BRD-7/2026-2027/ 168

Date: 27,08, 2026

This Certificate is issued pursuant to Section 93 of the Biodiversity Regulation of Bhutan 2023.

Mr. Choki Dorji, bearing CID number: 11105003450 and Dr. Yasir Serag Alnor Mohammed Serag Alnor, bearing Passport No: P10747650, are permitted to transfer 67 number of accessions of wheat currently conserved at the National Plant Genebank, NBC to support Master's research titled "The Changes in the Genetic and Agronomic Trait Diversity of Bhutanese Wheat." of Mr. Choki.

The details of the material are as follows:

Material Description: 67 number of accessions of wheat

Purpose of Transfer: Master's study research trial in Bhutan and not for third country transfer

Name of the Contract Agreement: Material Transfer Agreement

Reference number of the contract agreement: NBC/BRD-7/2026-2027/151

This Certificate is valid for **one-time transfer of the above-mentioned genetic resource(s)** and **only for the purpose indicated**.

NATIONAL BIODIVERSITY CENTRE ★ SERBITHANG ★ MINISTRY OF AGRICULTURE & LIVESTOCK, THIMPHU

Dr. Karma Dema Dorji

Program Director/National Focal Point

Program Director
National Biodiversity Centre
Serbithang