



**MEMORANDUM OF UNDERSTANDING
ON
CARBON CAPTURE, UTILIZATION AND STORAGE
BETWEEN
FACULTY OF ENGINEERING AND FACULTY OF SCIENCE,
CHIANG MAI UNIVERSITY
OF THAILAND
AND
CLIMATE CHANGE RESPONSE RESEARCH DIVISION AND
MARINE GEOLOGY AND ENERGY RESEARCH DIVISION,
KOREA INSTITUTE OF GEOSCIENCE AND MINERAL RESOURCES
OF THE REPUBLIC OF KOREA**

The Chiang Mai University (hereinafter referred to as CMU) and Korea Institute of Geosciences and Mineral Resources (hereinafter referred to as KIGAM) are mutually interested in pursuing scientific and technical cooperation in the Carbon Capture, Utilization and Storage. CMU and KIGAM (hereinafter referred to as the Parties) have reached the following agreements:

ARTICLE 1: OBJECTIVITIES

The Parties agree to conduct activities in the fields of Carbon Capture, Utilization and Storage on the basis of equality, reciprocity and mutual benefit. The purpose of the Memorandum of Understanding (MOU) is to provide a framework for the exchange of scientific and technical knowledge and the augmentation of scientific and technical capabilities related to Carbon Capture, Utilization and Storage.

ARTICLE 2: FORMS OF COOPERATION

The cooperation and exchanges between the Parties, dependent upon the availability of funds and personnel, may be conducted in the following forms:

- (1) Exchange visits of scientists and specialists;
- (2) Conducting joint symposia, conferences and seminars;
- (3) Exchange of scientific and technical information;
- (4) Joint research programs;

- (5) Collaboration on individual research of mutual interest;
- (6) Training of individual scientists through participation in collaborative projects; and,
- (7) Other forms of cooperation as may be mutually agreed between the Parties.

ARTICLE 3: AREAS OF COOPERATION

Specific areas of cooperation may include, but are not limited to, such areas of mutual interest as:

- (1) Site characterization for CO₂ storage;
- (2) CO₂ storage enhancement technologies;
- (3) Safety management technologies in CCS;
- (4) Monitoring technologies in CCS;
- (5) Artificial intelligence analytics in CCS;
- (6) Mineral carbonation;
- (7) CO₂ mineralization in CCS;
- (8) Marine CCS site survey; and,
- (9) Other areas that may be later identified

ARTICLE 4: IMPLEMENTATION

The Parties will have meetings as required to review the progress of cooperation under this MOU. The date and location of these meetings that will be held alternately in the Thailand and Republic of Korea will be jointly decided upon through consultation between the Parties. All information related to such meetings will be exchanged in advance. Under the terms of this MOU, technical, financial, and all other details, including intellectual property issues for all projects, shall be included in a written and signed implementing arrangement between the Parties. Work will proceed in accordance with these signed work plans or project annexes validated by the Parties through the signature of a specific Research Agreement (RA). Signed work plans or project annexes will be appended to the MOU and considered a permanent record. Any activity beyond this MOU will be described in the annex and be part of the MOU. If one Party requests cooperation beyond the capacity of the other Party, the Parties, by mutual agreement, may try to involve other organizations in the activities pursuant to this MOU.

ARTICLE 5: GOVERNING LAW

This MOU shall not constitute a binding legal obligation on the Parties. Nothing in this MOU creates an obligation for any Party to execute a binding agreement and shall be deemed to constitute a joint venture, partnership, agency, or exclusive relationship between the Parties for any purpose whatsoever. The joint scientific cooperative activities will be conducted in accordance with the applicable laws, statutes and regulations of the Thailand and Republic of Korea.

ARTICLE 6: LIAISON

For the purpose of implementing this MOU, The Parties shall conclude a separate plan of work, including but not limited to the detailed provisions relating to forms and methods, financial obligations, and the condition of the agreed areas of cooperation. All notices related to the

implementation of this MOU will be in written form and shall be deemed delivered when delivered in person or received by email, certified mail, return receipt requested, addressed to the recipients designated above, subject to any change of address, written notice of which will be promptly provided. Any changes regarding the contact points will not be regarded as an amendment. Either Party wishing to change its contact points has to inform the other Party, in writing, about the details of the new representative. Each Party shall designate a person or office to serve as a liaison responsible for the implementation of this agreement.

ARTICLE 7: SOURCES OF FUNDING

No financial obligations on either Party are implied by the MOU. In accordance with the principle of equality and reciprocity, each Party will normally cover its own costs in carrying out cooperative projects, unless specific financing becomes available for selected projects of mutual interest. Cooperative activities under this MOU will be subject to and dependent on the financial support and manpower available to the Parties. The terms of funding will be established by the Parties in the signed implementing arrangements before the commencement of each activity.

ARTICLE 8: PUBLICATION

The scientific and technical results of cooperative projects conducted under this MOU will be shared, published, or held confidential in accordance with the specific terms agreed upon by the Parties in the implementation of an individual project. Furthermore, the collaborative research activities under this MOU result in any potential for intellectual property, and each Party shall seek an equitable and fair agreement as to ownership and other property interests that may arise.

ARTICLE 9: SHARING OF INFORMATION

Each Party reserves the right to publish the results of this collaboration. Before submission for publication, however, each Party shall notify the other of its intention to publish and shall submit the manuscript to the other Party for review and comment. The Reviewing Party shall have thirty (30) days from receipt of the manuscript to present any written comments to the other Party. The reviewing Party's comments shall be given due consideration by the other Party. The publication of the results may be delayed at the reviewing Party's written request for a period not to exceed ninety (90) days if it contains a disclosure of an invention(s) on which either Party desires to file a domestic or foreign patent. It is understood that in no case can this provision for delay of publication cause a delay in the normal research progress of either Party with respect to the preparation and submission of a publication.

ARTICLE 10: INTELLECTUAL PROPERTY RIGHTS

Each Party shall respect, within its territory, the intellectual property rights (IPR) of the other Party in accordance with the prevailing laws and regulations in their respective country. However, that Party shall endeavor to ensure that the IPR does not result from the infringement of any third party's legitimate rights. The ownership of all IPR held by a Party prior to entering into this MOU and disclosed in connection with this MOU will remain with the disclosing Party. The Parties shall

jointly own any intellectual property resulting from cooperation activities under this MOU. The Parties shall conclude separate arrangements to regulate joint ownership and utilization of the aforementioned intellectual property in accordance with the prevailing laws and regulations of the respective countries. The Parties agree that the provisions of this Article shall survive the expiration or termination of this MOU.

ARTICLE 11: MATERIAL TRANSFER AGREEMENT

Research materials originating from one of the Parties used for the cooperation activities under this MOU shall, to the fullest extent possible, be done in the country of origin. In the event that activities under this MOU require such research materials to be transferred outside the territory of the country of origin, a separate Material Transfer Agreement shall be concluded between the Parties in accordance with the prevailing laws and regulations of the country of origin.

ARTICLE 12: CONFIDENTIALITY

The Parties agree that any confidential data and information provided to each Party or shared in relation to the implementation of this MOU, shall not be transferred, exchanged or supplied to any third party without the prior written consent of the other Party except as required by law. The Parties shall not use confidential information or documents exchanged under this MOU for any purpose other than the intended purpose, which shall be the purpose of undertaking the cooperation activities under this MOU. The Parties agree that the provisions of this Article shall survive the expiration or termination of this MOU.

ARTICLE 13: SETTLEMENT OF DIFFERENCES

Any differences arising in relation to the interpretation and implementation of this MOU may be settled amicably by consultation or negotiation between the Parties on the basis of mutual understanding and goodwill. Any dispute that may arise with regard to the interpretation, operation, and implementation of this MOU will be promptly settled in an amicable way through consultation between the Parties based on mutual benefit, equality, cooperation, and mutual trust. If the dispute cannot be settled amicably, it shall be finally decided by arbitration according to the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules in common use. The place of arbitration shall be determined after considering the geographical distances of the two entities, governing laws and legislature, and others. The arbitration and mitigation process will be conducted in English language. The arbitration proceedings and the arbitral award shall be confidential, and involved persons on both sides are pledged to secrecy.

ARTICLE 14: FORCE MAJEURE

Neither party to this agreement shall be liable to the other for any failure or delay in the performance by circumstances beyond its control, including but not limited to inevitable natural calamities such as fire, flood, earthquakes, any acts of God, as well as consisting of human and societal difficulties, i.e., labor difficulties, governmental actions, and wars in between countries.

ARTICLE 15: PERIOD OF VALIDITY AND TERMINATION

This MOU will come into effect upon signature by both Parties and will remain valid for an initial period of five (5) years. Each Party may terminate this MOU by providing a written note to the other Party. This MOU will be suspended in ninety (90) days after the receiving Party acknowledges the written note. The termination of this MOU will not affect the execution of the projects which have been initiated prior to such termination. After the termination of this MOU, all cooperative projects underway will continue up to completion according to the original signed implementing arrangement.

☞ FOR FACULTY OF ENGINEERING,
CHIANG MAI UNIVERSITY (CMU)

☞



ASSOC. PROF. DR. THONGCHAI
FONGSAMOOTR
DEAN, FACULTY OF ENGINEERING

DATE: 30 May 2024

☞ FOR CLIMATE CHANGE
RESPONSE RESEARCH DIVISION,
KOREA INSTITUTE OF GEOSCIENCE
AND MINERAL RESOURCES (KIGAM)

☞



DR. SEUNG-WOO LEE
DIRECTOR, CLIMATE CHANGE
RESPONSE RESEARCH DIVISION

DATE: 11 June 2024

☞ ☞ FOR FACULTY OF SCIENCE,
CHIANG MAI UNIVERSITY (CMU)

☞



PROF. DR. TORRANIN CHAIRUANGSRI
DEAN, FACULTY OF SCIENCE

DATE: 30 May 2024

☞ FOR MARINE GEOLOGY &
ENERGY RESEARCH DIVISION,
KOREA INSTITUTE OF GEOSCIENCE
AND MINERAL RESOURCES (KIGAM)

☞



DR. BYOUNG YEOP KIM
DIRECTOR, MARINE GEOLOGY &
ENERGY RESEARCH DIVISION

DATE: 11 June 2024