

MEMORANDUM OF UNDERSTANDING

BETWEEN

National Taiwan University

Department of Geosciences

**No. 1, Sec. 4, Roosevelt Rd.,
Taipei 10617, TAIWAN ROC**

herein represented by Prof. Yih-Min Wu (Chairman)
in his capacity as
Department of Geosciences, National Taiwan University
(hereinafter referred to as “NTU”)

and duly authorised

And

University of the Western Cape
Head, Department of Earth Sciences

herein represented by Prof. Dirk Frei
in his capacity as Head of the Department of Geosciences
(hereinafter referred to as “UWC”)

**RELATING TO: Collaboration in the field of Paleoclimate Research and Capacity
Development in the field of Geochronology**

WHEREAS

- The UWC has established a strong groundwater programme linked to a variety of other water disciplines under the umbrella of the UNESCO CHAIR in Hydrogeology and the Institute for Water and Environmental Studies, which trains undergraduate and post-graduate students and provides in-service training to working class within South Africa and beyond;
- The UWC has established a growing network of academic institutions in the earth sciences and among water resources scientists, nationally and internationally;

- and
- The NTU strives to promote high quality and equitable capacity-building in geochronology, paleoclimatology, and related fields and has a need for staying academically abreast in the execution of its mandate and the career development of its individual staff members;
- The Parties wish to strengthen and formalise their collaboration in identified areas, and, where necessary, work towards a standing contract(s) arrangement.

NOW THEREFORE THE PARTIES HERETO AGREE AS FOLLOWS:

1. The Preamble hereto shall form an integral part of this Agreement.

2. **CONFIDENTIALITY/SECRECY**

- 2.1 The Parties shall:

- (a) treat as strictly confidential and secret any and all INFORMATION given or made known to them arising from this association;
 - (b) keep all such INFORMATION obtained secret towards third parties and only use it in co-operation with each other for the purpose expressly agreed upon by the Parties and to disclose same to their employees only on the basis of the need to know;
 - (c) accept responsibility for the observance of the Secrecy Agreement by their employees;
 - (d) if required, cause all of their employees who are directly or indirectly given access to the said proprietary and secret INFORMATION to execute Secrecy Undertakings in a form acceptable to the Parties in order to protect the Parties against the unauthorised disclosure of such INFORMATION to any third party and to fully co-operate in the enforcement of such Secrecy Undertakings.

- 2.2 The above undertakings shall not apply to

- (a) INFORMATION which at the time of disclosure is published or

otherwise generally available to the public.

- (b) INFORMATION which after disclosure by the disclosing party is published or becomes generally available to the public, otherwise than through any act or omission on the part of the disclosing party.
- (c) INFORMATION which the Parties can show was in their possession at the time of disclosure and which was not acquired directly or indirectly from each other.
- (d) INFORMATION rightfully acquired from others who did not obtain it under pledge of secrecy to either of the Parties.
- (e) INFORMATION which a party is obliged to disclose in terms of an Order of Court, subpoena or other legal process.

2.3 This MOU shall not confer rights to any invention, discovery, improvement or know-how emerging from the execution of any further joint Project on either Party and such ownership of rights shall form the subject matter of a separate agreement(s) between the Parties.

2.4 Scientific publications under the collaborative projects should be encouraged.

3. SCOPE OF THIS MOU

3.1 This MOU sets out the basis on which the Parties shall negotiate in good faith in order to identify a project or projects such as those contained in Annexure "A", with the aim of concluding a contractual agreement(s) relating to such identified areas of possible collaboration.

3.2 Each Party shall furthermore provide a documented breakdown and valuation to the other Party of its intended contribution to the proposed collaboration, on a project-to-project basis.

3.3 Nothing contained in this MOU shall be construed, as binding the Parties to any form of exclusivity and both Parties shall be entitled to conduct business independent of each other where market requirements so dictate, unless otherwise agreed upon in writing in a formal agreement(s) as envisaged in Clause 4.1 below.

4. PROPOSED FORMAL AGREEMENTS

- 4.1 It is the firm intention of both the parties to enter into a formal agreement(s) on a project by project basis, which agreement(s) will incorporate the terms of this MOU as well as such other terms as the parties may subsequently consider desirable or necessary.
- 4.2 The Parties record by their signature hereto that this document is intended to promote a business relationship in good faith, for the benefit of both the parties.
- 4.3 At the effective date hereof, the following possible areas of collaboration as appear from Annexure "A" hereto, have been identified.

5. AGENCY AND PARTNERSHIP

- 5.1 No party shall present itself as the representative or agent of the other party for any business, legal or any other reason, nor shall it have the power of authority to commit the other party, unless it receives the other party's prior written consent.
- 5.2 Nothing in this MOU shall be interpreted as establishing a partnership or joint venture between the Parties and both parties shall act as independent contractors.

6 COMMENCEMENT AND DURATION

- 6.1 This MOU shall operate as from the effective date thereof and shall remain binding for a period of ten years, unless terminated prior thereto by mutual consent between the parties.
- 6.2 This MOU may, after expiry thereof, be renewed by the parties, in accordance with Clause 9.2 below.

7. FINANCIAL ARRANGEMENTS

- 7.1 Each Party shall be responsible for its own costs incurred in the execution of its duties in terms of this MOU, until such time as a written agreement has been reached on the contribution of each Party to a specific project(s) to be executed in collaboration.

7.2 Save insofar as breach of Clause 2 hereof is concerned and without in any way affecting the validity of this agreement, it is hereby recorded that neither party shall be liable as against each other merely as a result of premature cancellation of this MOU, unless otherwise agreed in a subsequent formal agreement(s), as envisaged in Clause 4 above.

8. **GOVERNING LAW**

This MOU shall be governed by and interpreted in accordance with the laws of the Republic of South Africa and the parties agree to any competent Court adjudicating upon any dispute arising out of this Agreement, unless otherwise agreed to in writing at the time between the Parties in an Arbitration Agreement.

9. **GENERAL**

9.1 This document and Annexure "A" hereto contain the entire MOU between the Parties and no Party shall be bound by any undertaking, representation or warranty not recorded herein or added hereto as provided herein.

9.2 No alteration, variation, addition or agreed cancellation of this MOU shall be of any force or effect unless reduced to writing as an addendum to this MOU and signed by the Parties or their duly authorized signatories.

9.3 No failure or delay on the part of any Party in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or privilege preclude any other or further exercise thereof, or the exercise of any other right, power or privilege. The rights and remedies herein expressly provided are cumulative and not exclusive of any rights

or remedies which the Parties would otherwise have.

9.4 No indulgence, leniency or extension of time which any Party ("the grantor") may grant or show to the other/s shall in any way prejudice the grantor or preclude the grantor from exercising any of its rights in the future.

9.5 All Parties shall pay their own costs relating to the preparation and settlement of this MOU.

9.6 This MOU shall be for the personal benefit of each of the Parties and may not be assigned in whole or in part by any Party without the prior consent of the other Parties, except that a Party's interest shall be assignable without the consent of the others in pursuance of any merger, consolidation or reorganization or voluntary sale or transfer of all or substantially all the assigning Party's assets where the merged, consolidated or reorganized corporation or entity resulting there from or the transferee of such sale or transfer has the authority and power effectively to perform that Party's obligations to the other under this MOU.

Signed at Dept Geosciences, NTU..... this day of 20.....

AS WITNESSES:

1.

.....
FOR NTU

2.

.....
CAPACITY

Signed at **Dept Geosciences, NTU.. dd/mm/2017**

AS WITNESSES:

1.

.....

UWC

2.

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CAPACITY

ANNEXURE A

MOU Implementation Plan: 2017 Aug-2027 July

Objective: To provide an agreed area of focus and a number of projects/activities of interest at this point in time with indicative budgets, which will allow the MOU to be realized over a practical ten year period starting in 2017/18 financial year.

Implementation of this MOU will draw on the following areas of expertise at UWC:

- Knowledge sharing in understanding the impact of climate change on groundwater resources;
- Knowledge sharing in designing certificate program in Integrated Water Resources Management including water governance and science;
- Capacity building and institutional strengthening through joint projects, professional and short courses offered to address various needs in a society

Implementation of this MOU will draw on the following areas of expertise at NTU:

- Field survey of appropriate caves for the research, speleothem sampling and storage.
- U-Th dating and carbonate trace elemental and isotopic techniques.
- Reconstruction of past climate and environment records and hydro-climate changes.

This MOU will support of the following key focus areas/ key strategic plans for both nations/countries internationally (South Africa and Taiwan ROC):

1. Ensure that water is positioned as a catalyst for development.
2. Ensure that water governance is viewed as a condition for sustained water delivery option.

3. Ensure that the need for sector skills development is implemented and sustained.
4. Ensure that research activities contribute to developing and maintaining preparedness for future climate changes and mitigating the effects on the water resources.
5. Ensure that strategic direction in research and development is planned and reviewed.

Given the UWC's cross-cutting water interest and the only UNESCO Chair in groundwater as a key resource with focus on assessment and protection of water resources, a special focus of the MOU with NTU will be in developing joint project proposals, designing and offering relevant practical and theoretical training in addressing water-related problems in South Africa and Taiwan ROC with several pilot areas (studies) in both countries.

The following will be aimed at, among others, as part of the implementation of the MOU.

- Strengthen the existing groundwater education activities at UWC for South Africa and Taiwan ROC and other African countries where possible.
- Enforce biannually regular meetings to discuss progress, explore new areas of collaboration and new avenues in capacity building and research areas.
- Broaden international networks in Africa and beyond Africa re water resources forum.
- Implement capacity building tasks such as in-service trainings using visiting professors as guest lecturers from both countries, internship for mentoring young water scientists, networking with experienced researchers for skills

transfer to upcoming researchers, consultations with key stakeholders as mentors among others.

Indicative Projects / Activities
1. To provide advice through planning meetings to research teams of both countries about the status and sustainability of groundwater resources utilization and management in South Africa and Taiwan ROC. This will entail implementing several research activities in selected pilot areas in South Africa and Taiwan ROC where remediation technologies will be applied alongside assessing studies in both countries.
2. To provide input to research agenda of governments of both countries regarding the use and management of groundwater and environmental resources. This will include strengthening the position of UWC and NTU Secretariat Offices on groundwater resources and remediation technologies for both countries. This will enable NTU address societal needs of South Africa and Taiwan ROC thereby making UWC-NTU think tanks, relevant, practical and strategic for both countries.
3. To assist South Africa and Taiwan ROC promote international collaboration initiatives by becoming Secretariat offices. The Departments of Water and Sanitation in South Africa and The Ministry of Science and Technology in Taiwan ROC will play the executive role whereas UWC and NTU as Secretariats implement day-to-day tasks including organizing biannual meetings, short course and meetings among other tasks as they arise.
4. As part of NEPAD Centre of Excellence, the Wellfield at UWC in Cape Town will serve as a SADC model site and a demonstration site to showcase the feasibility of latest telemetric equipment (technology) in managing groundwater resources. With other advanced infrastructure at UWC and in South Africa, this status for UWC will provide an opportunity for South Africa to showcase its leadership role to the rest of African countries on groundwater. NTU will also have one model site as a demonstration site to showcase the feasibility of various remedial technologies in cleaning up contaminated or polluted sites as management tools for the environment
5. To help to improve the capacity building and institutional strengthening in both countries, several tasks will be implemented including seeking funding from research institutions and government departments to give to identified persons for further studies, for in-service trainings, for short courses, for exchange field and laboratory visits among other training initiatives on groundwater studies and environmental related aspects. This will be through existing program at UWC and summer and winter schools programs. This approach will enable skills transfer from experts to upcoming scientists. Detailed programs for such training initiatives will be developed as the need arises. Annual needs assessment will

be conducted by UWC and NTU in both countries to inform alignment of such training initiatives.

6. To implement all these activities, UWC and NTU will seek funds from various sources in their respective countries so that the planned tasks in the MOU are operational and sustainable.