



MEMORANDUM OF UNDERSTANDING
BETWEEN
FERDOWSI UNIVERSITY OF MASHHAD, MASHHAD, IRAN
AND
RESEARCH INSTITUTE FOR GEO-HYDROLOGICAL
PROTECTION, NATIONAL RESEARCH COUNCIL, ITALY

The Research Department of Environmental Hazards and Ecosystem Management of Water and Environmental research institute, Ferdowsi University of Mashhad, located in Mashhad, Iran, represented by the President of the University **Prof. Mohammad Kafi** and the *Research Institute for Geo-Hydrological Protection of the National Research Council, Italy, hereafter referred to as CNR IRPI*, with legal address in Via della Madonna Alta 126, 06128 Perugia, Italy, represented by the Director, **Dr. Ing. Tommaso Moramarco**, and in the following also referred to gathers as the Parties and singularly as the Party,

AGREE

to establish a Memorandum of Understanding according to the following terms:

Article I: Purpose

The overall purpose of this Memorandum of Understanding, hereafter referred as MoU, is to share knowledge in the field of natural hazards mapping, prediction and modelling. To enhance the capability to further progress and develop research in this field, both the organizations will have scientific and technical cooperation in order to share, advance and develop knowledge, tools and methodologies for mapping, modelling and assessing the susceptibility, hazard and risk posed by geo-hydrological processes, accounting the geo-environmental conditions existing in Italy and Iran, and possibly in other countries with similar settings. For this purpose, data can be made available by the two Parties for their territories to be tested/used within the MoU framework.

Specifically, the purpose of this Memorandum is the joint cooperation through one or more of the following activities:

- Scientific research including:
 - Geo-hydrological and soil erosion mapping, soil geomorphology, soil conservation, soil restoration, eco-geomorphology, soil degradation, and related issues;

- Modelling and analysis of the hazard posed by surficial soil erosion, soil piping, tunnelling erosion, subsidence and sinkhole processes in natural and anthropic environments;
- Modelling and analysis of erosion problems in extended earthen levee systems for vulnerability analysis;
- Estimation of geomorphological and geo-hydrological hazards impacts and ecosystem risk analysis;
- Developments, testing, and validation of geo-hydrological and soil erosion models;
- Educational activities and outreach in subjects of common interest;
- Mobility of staff and researchers through a procedure jointly agreed by the Parties;
- Exchange of information and bibliographic materials and sharing of know-how on technical-scientific equipment; and
- Handling and organizing joint seminars and meetings.

Article II: Implementation

Should the implementation of the previous article require an agreement between the Parties or the provision of financial resources, the Parties shall develop specific projects and working plans to be formalized in appropriate addend a connected to this Memorandum. These Addenda shall specify the funds necessary for the implementation of the foreseen activities.

The Addenda specified in this article shall respect the following minimum requirements:

- goals to achieve;
- identification and description of the activities to implement;
- timetable and implementation stages;
- identification of available funds and foreseen costs; and
- Plan for the use of the financial resources.

Article III: Financial and safety arrangements

a) Unless otherwise indicated in this MoU or agreed to in writing by the Parties, both Parties will be responsible for their own expenses and costs incurred as a result of this MoU in their respective countries or unless otherwise mentioned in this MoU.

b) Unless otherwise mutually agreed upon in writing, each Party will be responsible for all the travel and accommodation expenses of their respective personnel.

c) Each Party will continue to pay the salary of their personnel for the duration of the visit, if any to other party's country or visiting any other relevant country for the development of the activities of this MoU.

d) Medical expenses will be the responsibility of each Party or their personnel, unless otherwise mutually agreed or mentioned in this MoU.

Article IV: Selection criteria

Participants in the activities foreseen in this Memorandum will be selected on the basis of merit without regard to race, national or ethnic origin, colour, religion, age, gender, marital status, physical disabilities, or sexual orientation. Each Party shall accept the participants selected by the other Party if mutually acceptable academic and/or professional qualifications and standards are met.

Article V: Coordination and monitoring

In order to provide scientific guidance, coordination and monitoring of the jointly agreed activities, each Party shall appoint its own representative.

a) The Ferdowsi University of Mashhad appoints **Dr. Adel SEPEHR**, head of research department of environmental hazards and ecosystem management, as responsible of all the aspects for coordinating this collaboration.

a) The CNR-IRPI appoints **Dr. Mauro ROSSI**, senior researcher, as responsible of all the aspects for coordinating this collaboration.

The two appointees shall periodically monitor the outcomes of this Memorandum.

Article VI: Intellectual property

a) The Parties will retain ownership of their existing Intellectual Property (IP) that they bring to the MoU. IP arising out or resulting from activities conducted under this MoU will be the joint property of both Parties subject to mutual conversations and agreements unless otherwise consented to by the Parties.

b) For the purpose of this Agreement "Intellectual Property" shall mean the subject matter listed in Article-I.

c) The Parties agree in principle to share the data derived from laboratory and field investigations under the MoU in accordance with the data policy and the best practices of each Party.

d) Procedures to archive and use the data will be coordinated and identified by consultation between the Parties.

e) Both Parties will ensure appropriate protection of IPRS generated from cooperation pursuant to MoU, consistent with their respective laws, rules and regulations and multilateral treaties to which both Parties are party to.

Article VII: Resolution of disputes

The Parties shall commit themselves to solving any dispute connected to the interpretation or implementation of this Memorandum through negotiation. When a jointly agreed solution cannot be achieved, the disputes shall be submitted to the unappealable decision of an ad hoc arbitration panel composed by three members. Each Party shall appoint one

member. The two appointed members shall jointly appoint the third member with the role of chairperson.

Article VIII: Coming into force and term

This Memorandum shall be effective as of the latest signature date below and shall remain in force for a period of three (3) years following this date, unless written notice is given by either Party. The notice shall take effect three months after the date of notification to the other Party. Nevertheless, the activities in progress in the framework of this Memorandum shall not be compromised by the notice and shall be normally concluded.

Article IX: Language and Copies of the memorandum

This Memorandum is drafted in English, in two equally original copies. Each Party shall keep one original copy.

Perugia, Italy, _____ 2021

Mashhad, Iran, 25 Sep 2021

Dr. Tommaso Moramarco

Director, CNR IRPI

M. Kafi

Prof. Mohammad Kafi

President, Ferdowsi University of
Mashhad

