UNESCO Chair on Coastal Geo-Hazard Analysis

Research Institute for Earth Sciences
Geological Survey of Iran

Annual Report

UNESCO Chair on Coastal Geo-Hazard Analysis
Research Institute for Earth Sciences
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unesco Chair

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UNITWIN

UNESCO Chairs

The UNITWIN/UNESCO Chairs Programme mobilizes expertise of higher education and research institutions to address the interdependent challenges of today's increasingly complex world.

It was established in 1992 with the vision to advance an integrated system of research, training and activities in diverse fields by building university networks and encouraging inter-university cooperation through the transfer of knowledge and expertise across borders.

The UNITWIN Programme is a unique intellectual and strategic resource of some 900 institutions from over 120 countries aimed at strengthening connections between research and development policy and practice at country, regional and global levels.

Annual Report / November 2023
(after guidelines and procedures,revised March 2022)

2023

PREFACE 2023

Executive office

The growing crisis caused by the effects of climate change and global warming has moved the global community away from carbon emissions. Sustainable development and achieving biological resilience through the use of clean and renewable energy, which is one of the provisions of the global climate conventions, brings the maximum development and localization of technology and knowledge, the development of infrastructure as well as the generalization and economization of this part of knowledge for everyone until 2030.

Today we are witnessing the rise and increasing use of “Artificial Intelligence” as a paradox between modernity, backwardness and sometimes tinged with demagoguery like other areas of knowledge in geological studies! In response to this problem, the production of basic geological information is associated with the production of wealth, the protection of national capital and its optimal management with the exploration of mineral resources, the estimation of possible geological risks and the preparation of land.

In this regard, geological maps can be mentioned as one of the most basic and complex information layers of geological data in the surface view of a territorial area. In different countries, the preparation of this basic information is considered the mission of the government, including geological surveys, universities and research institutes, the private sector or the participation of both, with the exponential explosion of the access to technological sciences at the beginning of the 21st century and new technologies to meet the ever-growing needs of the world's population, particularly disadvantaged countries, on the path to sustainable industrial development, agriculture, food security and, ultimately cycle...of the accumulation of wealth as an indicator of capacity and resilience as power inevitably leads to an ever-increasing use of effective human power and this depends on the knowledge that it is become a global trend.

Unfortunately, as we mentioned in the first annual report of the UNESCO Chair on Coastal Geo--Hazard Analysis, all contradictions exist in the global confrontation between human values and autocracy, war and peace, awakening and the fight for freedom and fundamental human rights.

That is why, at the end of 2023, we are happy and still proud that in addition to conceiving the idea and implementing new international studies in the field of coastal geological risks, broadly in the development of interdisciplinary sciences and the use of new technologies by forming and developing an international research network - Education beyond gender and beliefs, we have tried our best to create a change and contribute to improving the expertise of the younger generation.

2023

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REMARKS BY DIRECTOR OF THE RIES

Dr. RAZYEH LAK

The Research Institute for Earth Sciences (RIES) with over two decades of professional educational and research experience, is well known by distinguished faculty members and motivated researchers. This precious scientific background in the field of geology, natural hazards, environmental geology, mineral resources, geo-archaeology as well as the numerous scientific publications, in particular its official position and its relations with the Geological Survey of Iran (GSI) allowed RIES to be designated as the proposed host for a new UNESCO Chair in Coastal Geo-Hazards Analysis, which was finally approved in December 2021 by UNESCO. It could also be marked as a great honor for RIES, GSI and Iran.

Due to the serious growth of the environmental crisis in the world, especially on coastal areas, the UNESCO Chair in Coastal Geo-Hazards Analysis (UCCGHA) was created with the main objective of achieving sustainable coastal development by as the most sensitive ecosystem. Providing appropriate solutions to research, cultural and educational challenges, documenting information in the field of coastal geo-hazards and facilitating cooperation between students, researchers and academics is one of the prominent objectives of UCCGHA.

Fortunately, the UNESCO Chair on Coastal Geo-Hazard analysis has been largely supported by many scientists and academic members from universities and research institutes several countries such as Australia, Japan, China, Russia, Oman, Armenia, Germany, the Netherlands, Italy, France, the United Kingdom, Venezuela and Iran, which allowed us to organize an international scientific council at the start of the activities.

The conclusion of various memorandums of understanding with academic, executive, pedagogical and private departments, the establishment of public and specialized training programs at the international level are among the Chair's one-year achievements.

Close cooperation with UNESCO in programs and activities related to the recognition of coastal hazards and risks, such as the effects of climate and global warming on beaches and wetlands, Geo-environmental pollution, Tsunamis, Earthquakes, Floods, Erosion and sedimentation in coastal areas, Sea level fluctuations and finally helping sustainable development and increasing the resilience of the coasts are other objectives of the UCGHA.

REMARKS BY CHAIR HOLDER

Dr.HAMID NAZARI

The Research Institute for Earth Sciences (RIES) with over two decades of professional educational and research experi ence, is well known by distinguished faculty members and motivated researchers. This precious scientific background in the field of geology, natural hazards, environmental geology, mineral resources, geo-archaeology as well as the numerous scientific publications, in particular its official position and its relations with the Geological Survey of Iran (GSI) allowed RIES to be designated as the proposed host for a new UNESCO Chair in Coastal Geo-Hazards Analysis, which was finally approved in December 2021 by UNESCO. It could also be marked as a great honor for RIES, GSI and Iran.

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Although illiteracy has been considered as the main challenge of transitional societies in the twentieth century; at the beginning of the twenty-first century, what worries developing societies the most is "bad education" rather than "illiteracy"! In the absence of aimed education and sustainable development programs, illiteracy in a downward trend is replaced by "bad education". The "bad education" that occurs partly because of the ineffective educational system and partly due to the social despair of any possible positive reform, results in what is known as the indifference and irresponsibility of intellectuals.

So, in this context, undoubtedly, the role of the United Nations Educational, Scientific and Cultural Organization as a worldwide community of experts who want Earth to be a better place to live and desiring to preserve it “as the only known human habitat” is very essential. The UNESCO projects, with the formation of scientific institutions, the development of regional convergence and synergy, and the expansion of the systematic network of young scientists in a way, regardless of gender, borders, and limitations, has brought attentions to the future of humanity by focusing on thematic issues such as natural hazard, environment, climate change and renewable energy.

Support for earth sciences projects in term of IUGS/IGCP could be mentioned as a way for transferring knowledge and technology to developing countries or establishing institutions in communities and less developed countries; training skills in a scientific context with human goals would provide the future of strategic management in developing countries. The UNESCO's financial support for IGCP programs and the projects, albeit small, will ensure coherence and commitment to the research program in a regional and international scale.

Undoubtedly, the most important results of the formation and development of a network of young regional experts and future decision makers in such projects will promote the development of mutual understanding with respect to beliefs, and above all, the scientific needs and practical potential of societies. Purposeful societies protect global equality and justice by running the programs that ultimately lead to permanent production and accumulation of national wealth. In other hand, a more dynamic and active functioning of the UNESCO and its subsidiaries, not only provide easy access to up-to-date knowledge and technology for all, but also contribute to the development and sustainable international win-win relationship, which ensuring peace around the world!

MISSION

MISSION AND GOALS OF THE UNESCO

The UNESCO Chair on Coastal Geo-Hazard Analysis (CGHA) is established as a competitive policy of labeling Integrated Geo-Hazard Research Site with main objective as:

1) To provide new operational conditions for translational research in coastal geology in order to optimize and accelerate the production of new knowledge

2) To promote the dissemination and application of this knowledge in the coastal hazard assessment and sustainable development and increase the resilience of communities living on the shores.

The real focus of skills in the UNESCO Chair at CGHA, hosted by the Research

Institute for Earth Science (RIES) which is affiliated by Geological Survey of Iran (GSI) , brings together relevant professionals from universities, research institutes, as well as public and private research organizations, with the aim of public convergence, transfer, sharing and localization of knowledge.

Through the diverse approaches of a large scientific networking, the CGHA Chair covers the whole range of research for which the ultimate goal is the improved understanding, training, monitoring and prevention of the natural hazard in onshore and off shore as well.

The UNESCO Chair on Coastal Geo-Hazard Analysis after an initial establishment dated on December 2021 was launched officially at February 2022.

The main sectors of the chair are composed of a scientific council on an international scale and an executive council on a national scale.

Description of the tasks expected from the Scientific Council, strategic policies, spiritual and facilities support, convergence and integration of international powerity in the academic, educational and research sectors in line with UNESCO missions.

Description of the expected tasks of the Executive Council and its specialized sub-committees with the following titles: International Relations; Education, liaison with UNESCO universities, research centers and chairs; Publishers; Data center, catalogs and websites and subcommittee for research on the

implementation of macro policies approved by the Scientific Council, internal and external networking, attracting spiritual and material support, management and executive support based on the subject and mission of each subcommittee, compiling an annual training calendar And periodic reports are in line with UNESCO standards.

Description of the expected tasks of the Executive Council and its specialized sub-committees with the following titles: International affairs; Education, liaison with universities, Research centers and UNESCO Chairs; Publication; Data center and websites as well as subcommittee for research on the implementation of policies approved by the Scientific Council, internal and external networking, attracting spiritual and financial support, visa

Service, logistic facilities, management and executive support based on the subject and mission of each subcommittee, compiling an annual training calendar and periodic reports are in line with UNESCO standards.

The Executive Council based on: the Chairman, the Secretariat, the Steering Board and the specialized sub-committees.

The responsibility of the board of directors, headed by the executive director, is to make policies in the method/timing and supervise the performance of the sub-executive committees and how to achieve the goals of the chair in accordance with the mission announced by the scientific council.

The structural link between the members of the Executive Council and the

Specialized committees, both inside and outside the Executive Council, will be the Secretariat

OBJECTIVE

The objectives of the chair

- Identify, network and enhance cooperation between centers, structures of expertise and communities of practice in preventing radicalization, both in Iran and abroad
- Provide a high level of expertise and develop innovative action research programs, as well as models based on evidence and best practices, to shape not only public policy but also radicalization and violent extremism prevention programs at the local, national and international levels
- Support the capacity building of key stakeholders, particularly in research, in school and community settings, in both online and offline contexts
- Raise awareness, ensure visibility and transfer knowledge to the public and media.

INFRASTRUCTURE AND FLOW CHART OF THE CHAIR

This scientific/cultural event could be mentioned as an opportunity for scientificconnections and exchanges, opening a window of hope in the formation of aninternational network of Research centers and fifth-generation Universities.

Undoubtedly, a correct understanding of this valuable event for obtaining the UNESCOWorld Chair, given the international and structural capacities of the Chairs and theUNITWIN university network in the reconstruction, development, modernization and upgrading day. it can be a turning point in scientific direction by instilling the spirit of hope in the body of the geological community.

The UNITWIN program is the most important tool for capacity building in highereducation and research institutions, and UNESCO achieves this capacity buildingthrough the exchange and sharing of knowledge across the world under the shadow ofinternational solidarity and unity. Thus, UNESCO's strategy for the development of scientific institutes is to promote South-North, South-South and trilateral and multilateral cooperation.

Academic/research institutions work in partnership with NGOs, foundations and private and public sector organizations play an important role in promoting higher education.

The UNESCO Chair on CGHA in Iran, under the cover of international support with knowledge exchange and sharing, can be a capacity building tool

in developing an education and research network on geohazards, especially in coastal areas of one of the world's most seismic regions.

The UNESCO Chair on Coastal Geo- Hazard Anlysis (CGHA) is established as a competitive policy of labeling integrated Geo- Hazard Research site with main objectiveas:

1. To provide new operational conditions for translational research in coastal geology in order to optimize and accelerate the production of new knowledge

2. To promote the dissemination and application of this knowledge in the coastal hazard assessment and sustainable development and increase the resilience of communities living on the shores

3. Therefore, in line with UNESCO's strategy, the main objective of this Chair will be more beneficial and effective in developing a scientific network, promoting international cooperation between countries and parties.

The real focus of skills in the UNESCO Chair at CGHA hosted by the Research

The main sectors of the chair are composed of a scientific council on an international scale and an executive council on a national scale.

Description of the tasks expected from the scientific council, strategic policies, spiritual and facilities support, convergence and integration of international powerity in the academic, educational and research sectors in line with UNESCO missions.

It is very fortunate that this chair has from the beginning the structure and support of the internationally renowned scientific community in a range of Australia, Japan, China, Russia, Armenia, Germany, Netherlands, Switzerland, Italy, France and the United Kingdom as well as Iran.

Description of the expected tasks of the Executive Council and its specialized subcommittees with the following titles:

International Relations; Education, liaison with UNESCO universities, research centres and chairs; Publishers; Data center, catalogs and websites and sub-committee for research on the implementation of macro policies approved by the Scientific Council, internal and external networking, attracting spiritual and material support, management and executive support based on the subject and mission of each sub-committee, compiling an annual training calendar and periodic reports are in line with UNESCO standards.

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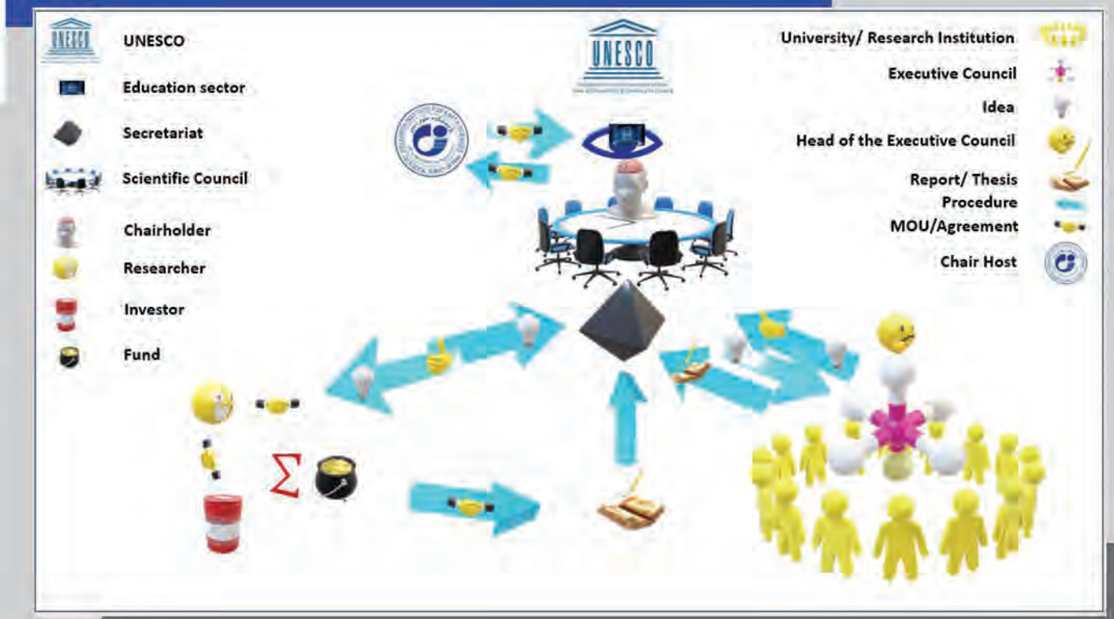
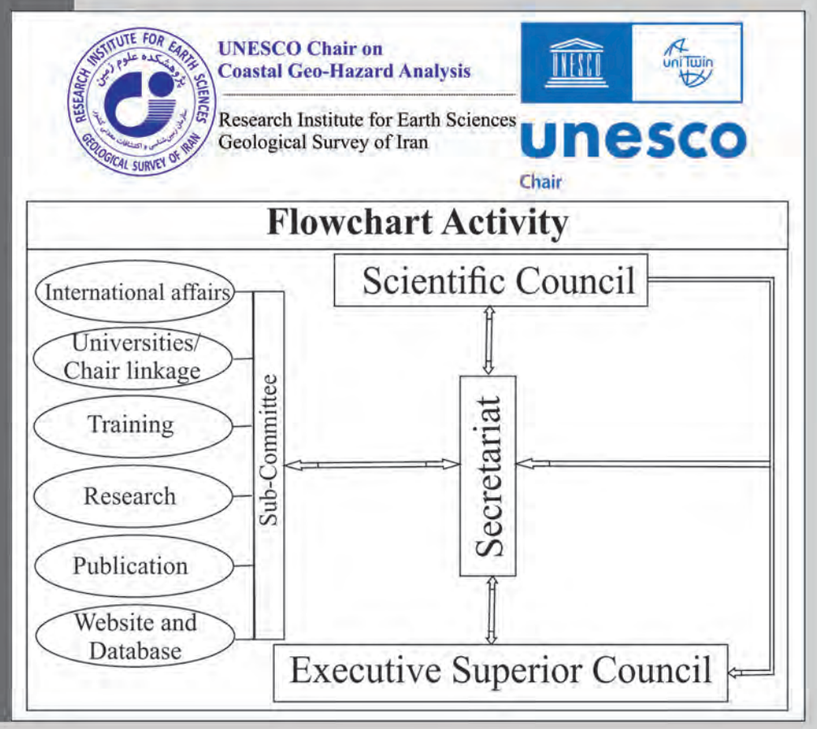
The executive Council based on: the chairman, the secretariat, the steering board and the specialized sub- committees.





The responsibility of the board of directors, headed by the executive director, is to make policies in the method/timing and supervise the performance of the sub- executive committees and how to achieve the goals of the chair in accordance with the mission announced by the scientific council.

The structural link between the members of the Executive council and the specialized committees, both inside and outside the Executive Council, will be the Secretariat.

Fortunately, to achieve this objective, despite the short time of activity of the Chair since its official announcement on December 3th, 2021, the UNESCO Chair has developed a roadmap and led constructive exchanges, concluded MOU or updated with research and academic centers, scientific associations and the private sector and knowledge-based enterprises and official media have a significant performance which, coupled with the growing network of education-research cooperation within and around from outside Iran's geopolitical borders, promises the possibility of forming agile structures.

The global educational dynamics and research, within the framework of national laws and governance in accordance with the needs and standards of the UNESCO in the 21st century, a century with rapid and fundamental changes in the framework of human attitudes towards knowledge and technology, thought and intellectuality in the concept of "literacy".

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EXECUTIVE COMMITTEE

The Executive Committee monitors our research program according to the Chair's objectives. It advises the chair holder and is responsible, among other things, for approving the annual activity rports, as well as any significant changes to the budget or the Chair's objectives.
The Executive Committee also approves the annual planning of research and dissemination activities, as well as the Chair's scientific program as defined by the Scientific Committee.

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Research Institute for Earth Sciences

Secretariat
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Dr. Manouchehr Qoreishi

Aazam Takhtchin (RIES)

Sedigheh Ghanipour (RIES)

Shirin Safavi (RIES)

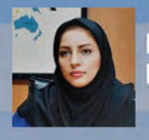
Hourieh Alibeygi

Elnaz Aghaali (RIES)

Hamoon Memarian

Mehrnoosh Poorsaeed

Keivan Ajdari (RIES)



Hanieh Bakhshaei (GSI)

Dr. Reza Behbahani (GSI)

Dr. Javad Darvishi khatooni (GSI)

Mohammadreza Ensani (GSI)

Marziyeh Estrabi Ashtiyani (GSI)

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DEVELOPMENT

Development of regional relations of the UNESCO Chair in Coastal Geo- Hazards

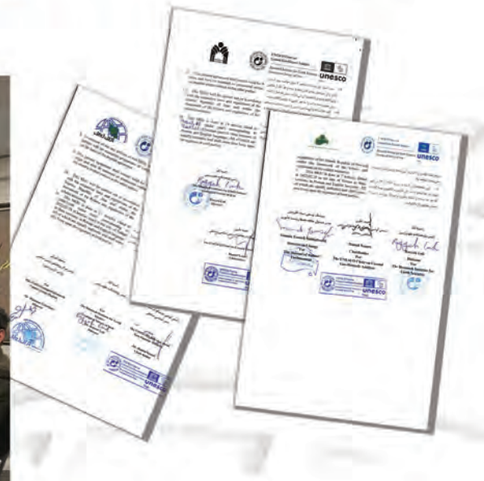
In order to cooperate and develop relations in the field of geosciences, the joint meeting of the UNESCO Chair in Coastal Geo- Hazards, Research institute for Earth Sciences and Geological Survey of Iran was held with German University of Technology in Oman, Sultan Qaboos University and Meteorology and Air Navigation Complex (PACA) in 13-15 December 2022. In this meeting, the officials, while welcoming, the professors of that group gave a presentation of the university and its facilities and Director of RIES, Deputy of GSI and Chairholder presented a presentation of their performance and activities and also, at the end of the meeting, the expedition team visited that complex and it was decided to conclude a memorandum of understanding for cooperation between the Research Institute of Earth Sciences and the chair.

Research /Edu Activity

MEMORANDUM OF UNDERSTANDING

Trilateral Memorandum of Understanding between UNESCO Chair on Coastal Geo- Hazards Analysis, and Research Institute for Earth Sciences, Geological Survey of Iran

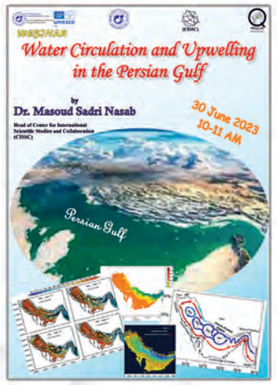
1. Afarinesh consulting Engineering
2. Caspian Sea Ecological Research Center
3. Department of Environment of Mazandaran
4. Geological Society of Iran
5. German University of Technology in Oman
6. Golestan University
7. Hormozgan University
8. Imam Khomeini International University
9. Institute of Geology and Geophysics, Chinese Academy of Sciences
10. International Association for Promoting Geoethics (IAPG)
11. Iranian Quaternary Association
12. Journal of Animal Environment
13. KanIran Consulting Engineering Company
14. Kharazmi University
15. Mazandaran Department of Environment
16. Pardazesh seir afagh
17. PARS Geological Research Center (Arian Zamin)
18. Qeshm Island UNESCO Global Geopark
19. Raspina Virtual Development
20. Shahrood University of Technology
21. Shargh Daily news paper
22. Technological Cooperation Between Seismology Research Center of International Institute of Earthquake Engineering and Seismology
23. UNESCO Category 2 Regional Education and Research Centre on Oceanography for West Asia (RCOWA)
24. UNESCO Chair on Engineering Education
25. University of Science and Technology of Mazandaran
26. University of Tehran
27. Urmia University
28. International UNESCO Center for Health Related Basics Sciences and Human Nutrition
29. Research Institute of Applied Sciences

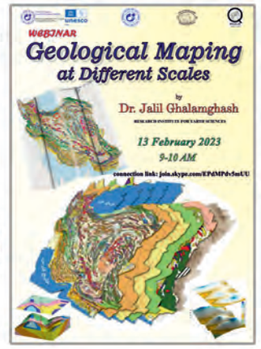


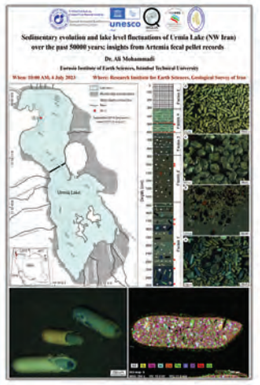
Research / Edu Activity

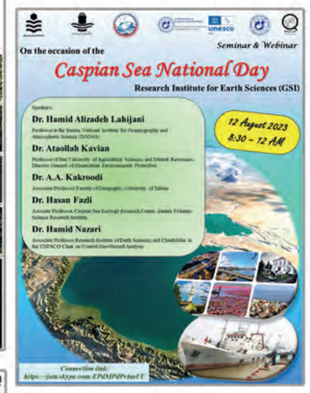
CONFERENCES AND WORKSHOPS

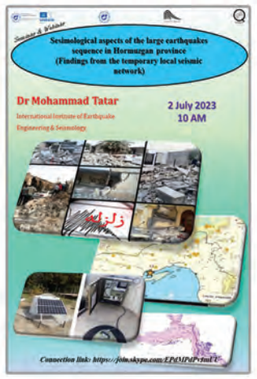
1. Caspian Sea National Day 12 August 2023
2. Geological Mapping at Different Scales, 13 February 2023
3. Seismological aspects of the large earthquakes sequence in Hormozgan province (Findings from the temporary local seismic network), 2 July 2023
4. Sedimentary evolution and lake level fluctuations of Urmia Lake (NW Iran) over the past 50000 years; insights from Artemia fecal pellet records- 4 July 2023
5. Water circulation and upwelling in the Persian Gulf – 30 June 2023
6. 19th anniversary of the Bam Earthquake (6.6 Mw), 26 December 2023
7. The international association for promoting Geothics. 30 July 2023
8. 26th Conference of Geological Society of Iran
9. The 25th Symposium of Geological Society of Iran
10. The 41st National Geosciences Congress
11. 5th National Conference on Quaternary Sciences











Research / Edu Activity

PUBLICATION MEETING

- Joint Meeting between UNESCO Chair on CGHA and Korea University
- Joint Meeting between UNESCO Chair on CGHA and Tokushima University
- Joint Meeting between UNESCO Chair on CGHA and Executive committee
- Joint Meeting between UNESCO Chair on CGHA, Ecology Research Institute and Oceanography and Atmospheric Sciences and Department of Environment of Mazandaran
- Joint Meeting between UNESCO Chair on CGHA and International Association for Promoting Geoethics
- Joint Meeting between UNESCO Chair on CGHA and GUtech University
- Joint Meeting between UNESCO Chair on CGHA and Sultan Qaboos University
- Joint Meeting between UNESCO Chair on CGHA and Meteorology and Air Navigation Complex (PACA)

RESERCH PROJECT

Geo-Archaeology

1 Project Name:

The Transition from Hunter Gathering to the Framing Societies in the southern of Caspian Sea shoreline, Human and environment interaction

Duration of the Project:
Oct. 2021 to 2024

Main financial funder:
The Ministry of Cultural Heritage, Handicraft and Tourism, Iran
University of Reading (UK)
German Archaeological Institute, Tehran Branch, Germany

Main project manager:
University of Tehran, Iran, (Hassan Fazeli Nashli)

Internal/ External Project collaborators:
The Ministry of Cultural Heritage, Handicraft and Tourism, Iran
Iranian Center for Archaeological Research, Iran
Research Institute for Earth Sciences, Geological Survey of Iran, Iran
University of Reading, UK
German Archaeological Institute, Tehran Branch, Germany
University of Warsaw (Poland)

2 Project Name:

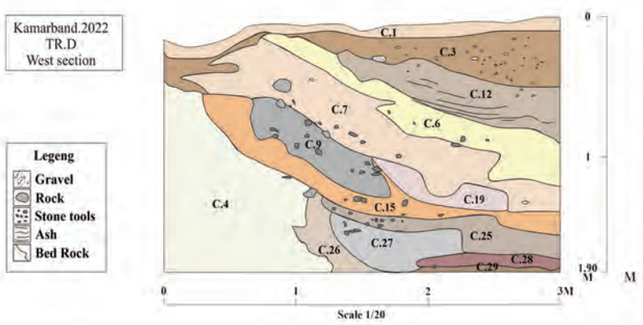
Geoarcheology of Behshahr region, SE Caspian

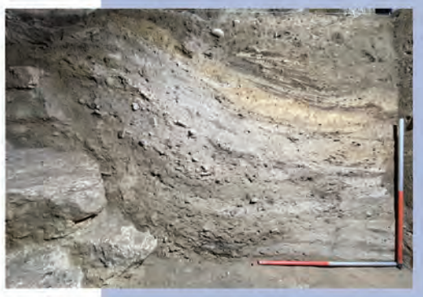
Duration of the project:
June 2022 to 2025

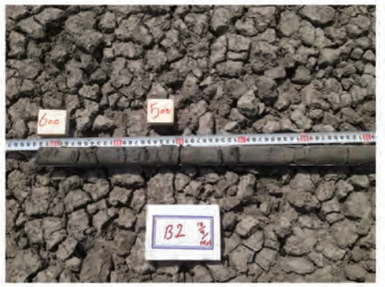
Main financial funder:
German Archaeological Institute, Germany
Research Institute for Earth Sciences, Iran

Main project manager:
German Archaeological Institute, Tehran, Germany: (Judith Thomalsky)

Internal/ External collaborator:
-University of Tehran, Iran
-Research Institute for Earth Sciences, Iran
-Geological Survey of Iran







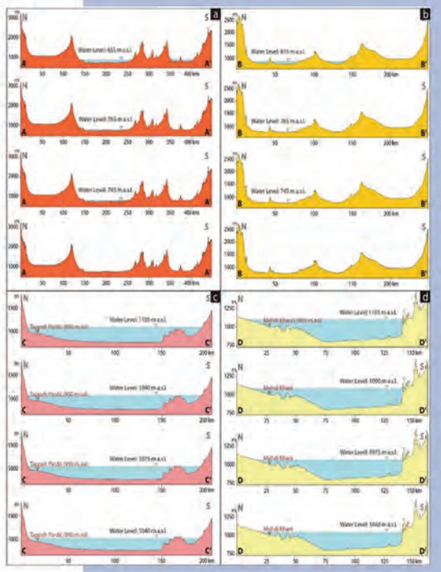
3 Project Name:
The history of the paleolake in Central Iranian Plateau

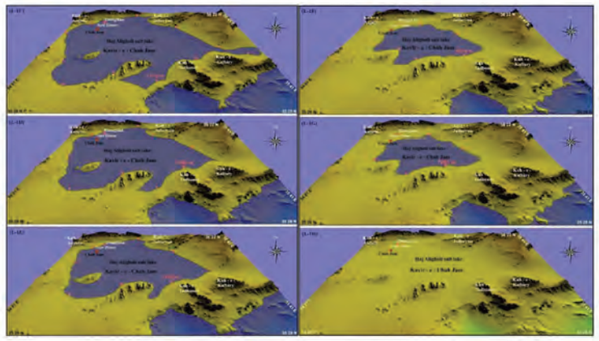
Duration of the project:
June 2010-2024

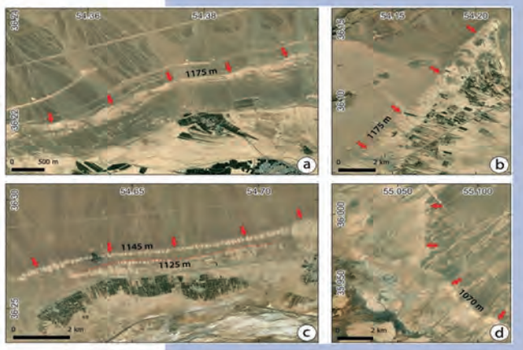
Main financial funder:
Research Institute for Earth Sciences, Iran
Geological Survey of Iran

Main project manager:
Research Institute for Earth Sciences, Iran, (Hamid Nazari)

Internal/ External collaborator:
France, US, Armenia, Japan and Iran







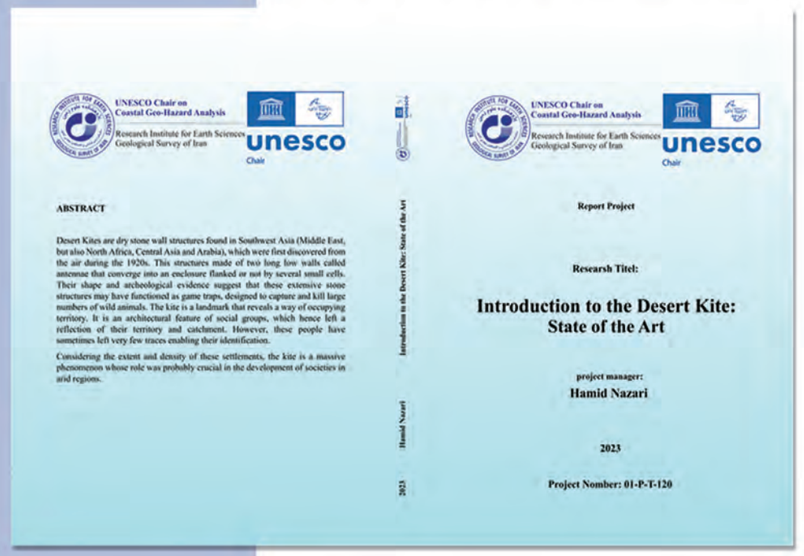
4 Project Name:
Introduction to the Desert Kite, State of the Art

Duration of the project:
2023 - 2025

Main financial funder:
Research Institute for Earth Sciences, Iran
South Korea University

Main project manager:
Research Institute for Earth Sciences, Iran, (Hamid Nazari)

Internal/ External collaborator:
South Korea, Germany, Armenia and Iran



UNESCO Chair on Coastal Geo-Hazard Analysis
Research Institute for Earth Sciences
Geological Survey of Iran
unesco Chair

ABSTRACT

Desert Kites are dry stone wall structures found in Southwest Asia (Middle East, but also North Africa, Central Asia and Arabia), which were first discovered from the air during the 1920s. This structures made of two long low walls called antennae that converge into an enclosure flanked or not by several small cells. Their shape and archeological evidence suggest that these extensive stone structures may have functioned as game traps, designed to capture and kill large numbers of wild animals. The kite is a landmark that reveals a way of occupying territory. It is an architectural feature of social groups, which hence left a reflection of their territory and catchment. However, these people have sometimes left very few traces enabling their identification.

Considering the extent and density of these settlements, the kite is a massive phenomenon whose role was probably crucial in the development of societies in arid regions.

Introduction to the Desert Kite: State of the Art
Hamid Nazari
2023

UNESCO Chair on Coastal Geo-Hazard Analysis
Research Institute for Earth Sciences
Geological Survey of Iran
unesco Chair

Report Project

Researsh Titel:

Introduction to the Desert Kite: State of the Art

project manager:
Hamid Nazari

2023

Project Nomber: 01-P-T-120

Paleoclimatology

5 Project Name:

Reconstruction of Holocene environments, Climate and Geography of Gomishan coastal zone, SE Caspian

Duration of the project:

Nov. 2021 - 2024

Main financial funder:

Iranian National Institute for Oceanography and Atmospheric Science, Iran

Research Institute for Earth Sciences, Iran

Chinese Academy of Sciences, China

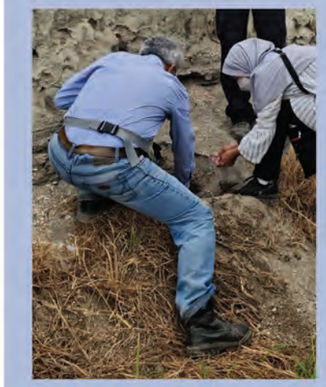
Main project manager:

Iranian National Institute for Oceanography and Atmospheric Science, Iran, (Hamid Alizade ketak Lahijani)

Internal/ External collaborator:

Research Institute for Earth Sciences, Iran

Lanzhou University, China



6 Project Name:

Determining the physical, chemical characteristics and changes in the sedimentation rate in the Miankala peninsula and its effect on the death of birds, SE Caspian Sea

Duration of the project:

Nov. 2022 - 2025

Main financial funder:

Research Institute for Earth Sciences, Iran

Chinese Academy of Sciences, China

University of Tehran, Faculty of environmental engineering

Main project manager:

Research Institute for Earth Sciences (Razyeh Lak)

Internal/ External collaborator:

Research Institute for Earth Sciences, Iran

Tehran University

Lanzhou University, China

RESERCH PROJECT

7 Project Name:

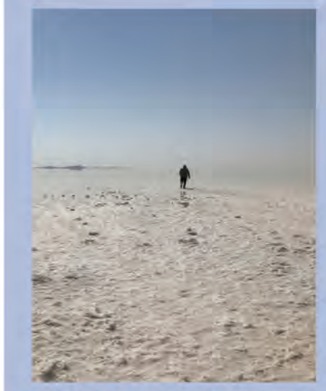
Monitoring of Hydrogeochemistry and brine evolution of Lake Urmia

Duration of the project:
Nov. 2022 - 2024

Main financial funder:
Research Institute for Earth Sciences, Iran
Geological Survey of Iran

Main project manager:
Research Institute for Earth Sciences, Iran, (Razyeh Lak)

Internal/ External collaborator:
Research Institute for Earth Sciences, Iran
Geological Survey of Iran



Tectonic and hazard assessment

8 Project Name:

Structural evolution of the Miankala Peninsula, SE Caspian

Duration of the project:
May 2022 to 2024

Main financial funder:
Research Institute for Earth Sciences, Iran
Geological Survey of Iran

Main project manager:
Research Institute for Earth Sciences, Iran, (Hamid Nazari)

Internal/ External collaborator:
Geological Survey of Iran
Research Institute for Earth Sciences, Iran

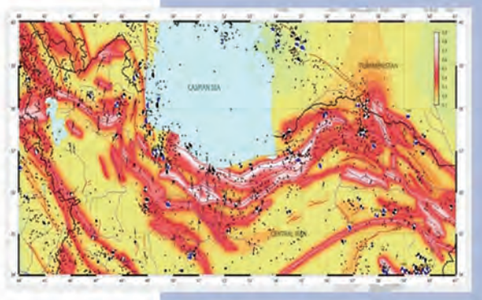
9 Project Name:

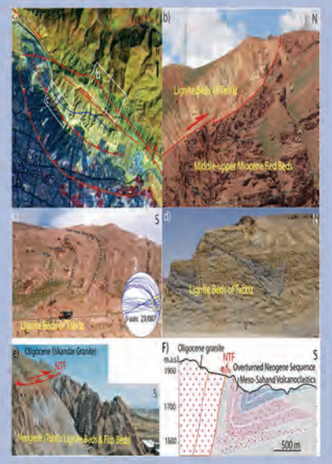
Iranian Earthquake Hazard Map (IEHM)
Duration of the project:
From 2014 - 2024

Main financial funder:
Planning and Budget Organization, Iran
Research Institute for Earth sciences, Iran

Main Project manager:
Research Institute for Earth sciences, Iran, (Morteza Talebian)

Internal/ External collaborator:
Research Institute for Earth Sciences, Iran
University of Tehran, Iran
University of Berkley, USA



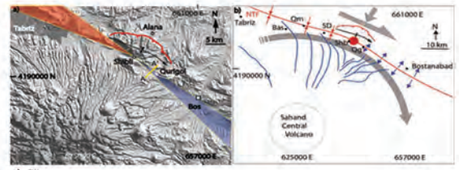


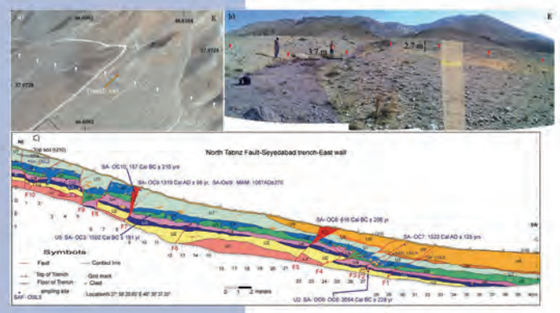
10 Project Name:

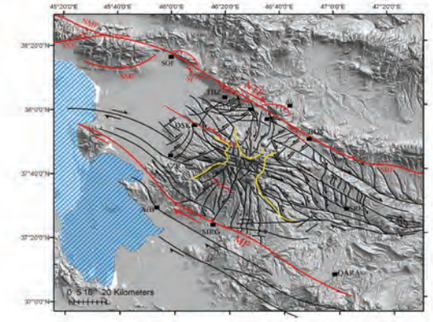
Paleoseismological studies and structural evolution of the North Tabriz Fault
Duration of the project:
2014 - 2023
Main financial funder:
Geological Survey of Iran

Main project manager:
Research Institute for Earth Sciences, Iran, (Mohammad Faridi)

Internal/ External collaborator:
Geological Survey of Iran
University of ETH Zurich, Switzerland
Research Institute for Earth Sciences, Iran







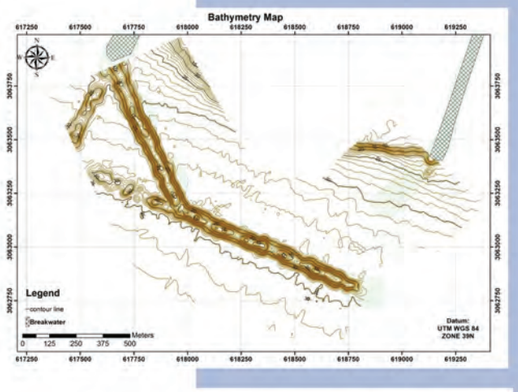
1.1 Project Name:

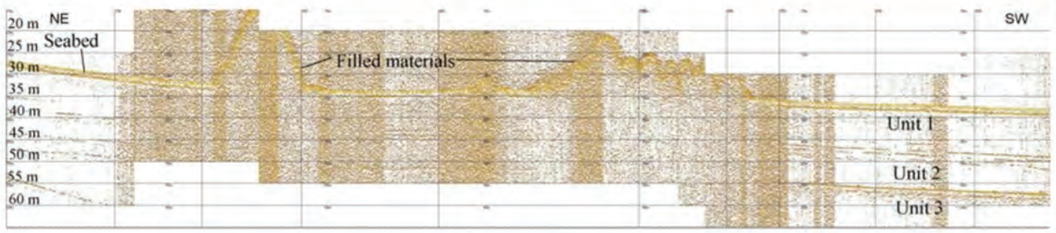
Collection of geophysical data by high-resolution shallow seismic method in Tombak region (Bushehr province) with an attitude on seismotectonic and morphotectonic characteristics

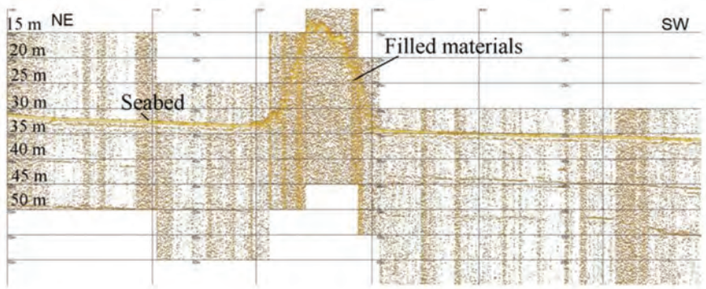
Duration of the project:
2016 - 2023
Main financial funder:
Geological Survey of Iran

Main project manager:
Geological Survey of Iran, (Reza Behbahani)

Internal/ External collaborator:
Geological Survey of Iran







1.2 Project Name:

Morphotectonic aspect on the Gavaraget fault west of Grand Sevan
Duration of the project:
2023 - 2025
Main financial funder:
CNRS, University of Montpellier, (Jean Francois Ritz)

Main Project manager :
Geological Institute of Armenia (Ara Avagyan)

Internal/ External collaborator:
Armenia, France, Russia and Iran

3 Project Name:

Paleoseismology in the North East of Sevan

Duration of the project:

2023 - 2025

Main financial funder:

Geological Institute of Armenia (Ara Avagyan)

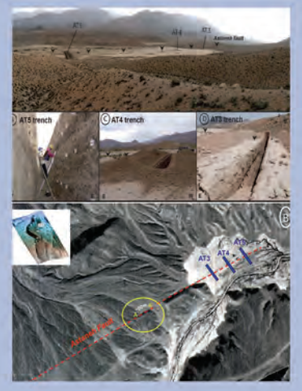
CNRS, University of Montpellier, (Jean Francois Ritz)

Main project manager:

Geological Institute of Armenia (Ara Avagyan)

Internal/ External collaborator:

Armenia, France, Russia and Iran



4 Project name:

A review of paleoseismological studies of the Astana fault system, Central Alborz

Duration of the project:

2022 - 2023

Main financial funder:

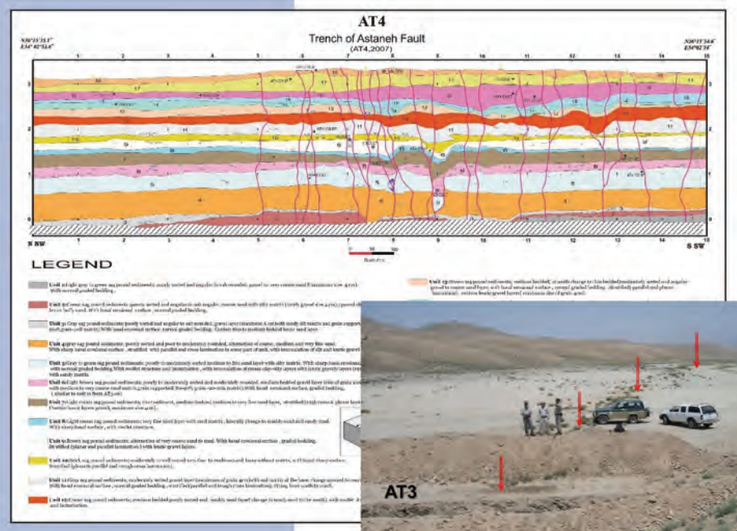
Research Institute for Earth sciences, Iran

Main project manager:

Research Institute for Earth Sciences, Iran, (Hamid Nazari)

Internal/ External collaborator:

France, US and Iran



Geology

15 Project Name:

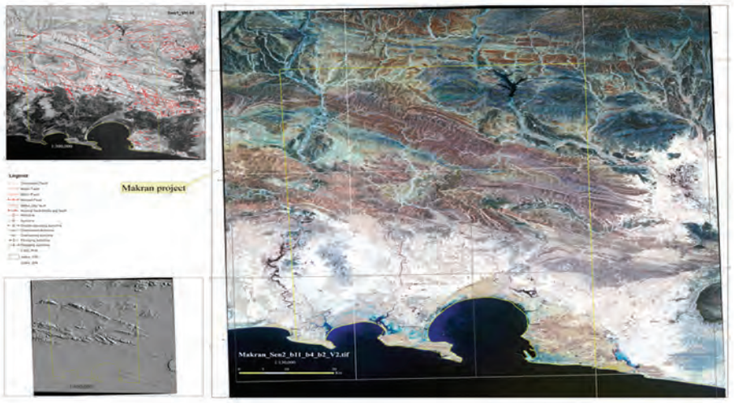
The Server-based Integrated and homogeneous thematic mapping in the Makran zone: Artificial Intelligence and Deep Machine Learning

Duration of the project:
2023-2026

Main financial funder:
Research Institute for Earth Sciences, Iran

Main project manager:
Research Institute for Earth Sciences, Iran, (Hamid Nazari)

Internal/ External collaborator:
Research Institute for Earth Sciences
Tarbiat Modares University



16 Project name:

Preparing an integrated geological map of Bushehr province

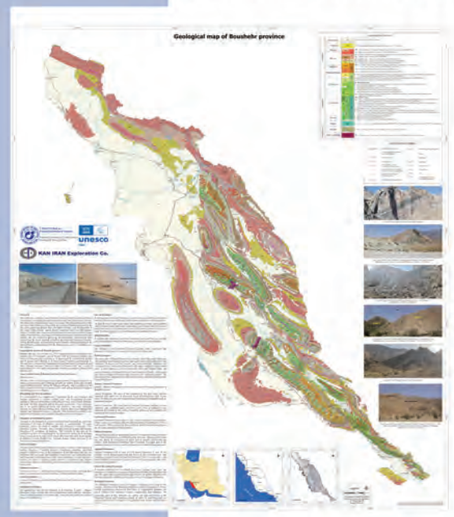
Duration of the project:
2021-2022

Main financial funder:
Organization of industry, mining and trade of Bushehr province

Main project manager:

Consulting Engineers KanIran (Ehsan Haj Molla Ali)

Internal/ External collaborator:
Research Institute for Earth Sciences



17 Project Name:
A review to Mass Extinction

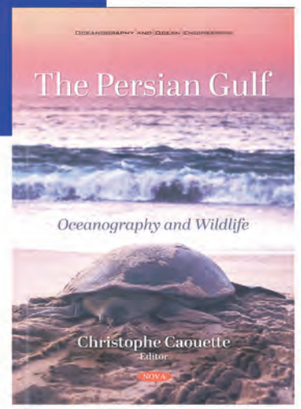
Duration of the project:
2023-2024

Main financial funder:
Research Institute for Earth Sciences, Iran

Main project manager:
Research Institute for Earth Sciences, Iran, (Hamid Nazari)

Internal/ External collaborator:
Research Institute for Earth Sciences

BOOKS BY CHAIR MEMBERS

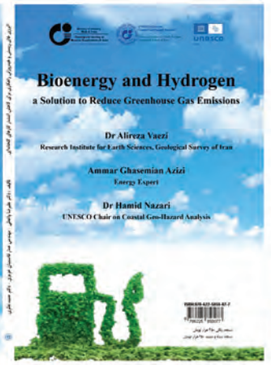


1 The Archaeology of Iran from the Palaeolithic to the Achaemenid Empire

By : Roger Matthews, Hassan Fazeli Nashli, Amy Richardson

2 Bioenergy and Hydrogen a Solution to Reduce Greenhouse Gas Emissions

By : Dr. Alireza Vaezi
Ammar Ghasenian Azizi
Dr. Hamid Nazari



3 Paleoseismology

Translated by: Hamid Nazari, Manouchehr Qarashi

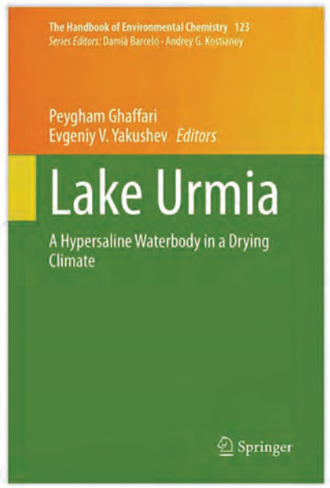
4 Persian Gulf

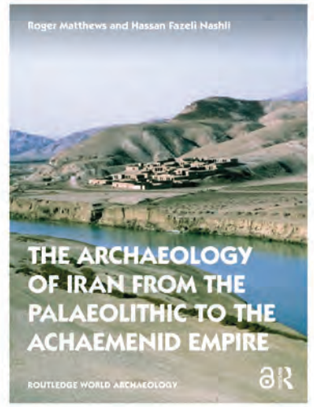
By : Reza Behbahani and Razyeh Lak

5 Urmia Lake

Chapter 13

By: Razyeh Lak, Ali Mohammadi and Javad Darvishikhatooni





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NEWSPAPER

گزارش

گشایش نخستین کرسی یونسکو در زمینه علوم زمین در کشور

حمید نظری•

سبب بسی خرسندی است که آغازبه‌کار رسمی نخستین کرسی یونسکو ایران را در حوزه علوم زمین با عنوان «برآورد مخاطرات زمین‌شناختی ساحلی» که از این پس به اختصار «مخاطرات زمین‌شناختی ساحلی» خوانده می‌شود، به میزبانی پژوهشکده علوم زمین وابسته به سازمان زمین‌شناسی و اکتشافات معدنی کشور به اطلاع عموم علاقه‌مندان و دانش‌پژوهان به‌ویژه دانشمندان، اندیشمندان و دانشجویان علوم زمین برسانیم. افتخاری که پس از نزدیک به سه سال فرایند ارزیابی علمی - اجرائی در سازمان یونسکو با تکیه بر پشتیبانی‌های بین‌المللی و توصیه‌نامه‌های حمایتی ارزشمند دانشمندان جهان به پژوهشکده علوم زمین اعطا شد. جایگاهی که تحقق آرمان‌های والای آن بی‌شک نیازمند اراده و همت ملی و همکاری سترگ و سخت در مقیاس بین‌المللی است.

مراسم افتتاحیه رسمی کرسی یونسکو در مخاطرات زمین‌شناختی ساحلی با همیاری پژوهشگاه ملی اقیانوس‌شناسی و علوم جوی، منطقه آزاد قشم و سازمان زمین‌شناسی و اکتشافات معدنی کشور به‌صورت مجازی و حضوری در روز چهارشنبه چهارم اسفندماه ۱۴۰۰ خورشیدی برابر با ۲۳ فوریه ۲۰۲۲ بر عرشه کشتی کاوشگر خلیج فارس به‌صورت ویدئوکنفرانس با حضور همه اعضای شورای علمی راهبری کرسی از کشورهای استرالیا، ژاپن، چین، روسیه، ارمنستان، آلمان، سوئیس، ایتالیا، فرانسه، انگلستان و ایران در ساعت ۱۳:۰۰ به وقت تهران برگزار خواهد شد.

حضور و تبادل نظر و ایده دو روزه و هم‌زمان دانشمندان حوزه زمین‌شناسی، اقیانوس‌شناسی، زلزله‌شناسی و باستان‌شناسی، استادان و پژوهشگران بنام دانشگاهی و مراکز پژوهشی از سه قاره اقیانوسیه، آسیا و اروپا در کنار میهمانانی از مقامات یونسکو از پاریس و کمیسیون ملی یونسکو و خوشه منطقه‌ای یونسکو در ایران، ژئوپارک جهانی قشم، رؤسای دانشگاه‌ها، مقامات ملی و استانی و همین‌طور منطقه آزاد قشم و مطبوعات در این مراسم در روزهای سوم و چهارم اسفندماه در جزیره قشم از ویژگی‌های یگانه و قابل توجه این مراسم است.

• عضو هیئت علمی پژوهشکده علوم زمین و رئیس کرسی یونسکو

UNESCO Chair on Coastal Geo-Hazard Analysis
Research Institute for Earth Sciences Geological Survey of Iran
unesco Chair

کرسی یونسکو در مخاطرات زمین‌شناختی ساحلی
پژوهشکده علوم زمین
سازمان زمین‌شناسی و اکتشافات معدنی کشور

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...ت" نرویم؛ مصرف را بهینه کنیم/خشک‌شدن کوهرنگ بعد از زاینده‌رود!

رییس پژوهشکده علوم زمین هشدار داد:

پیشروی امارات به سمت ابوموسی با توسعه سواحل/سرنوشت دریاچه ارومیه در انتظار جزایر حرا

رییس پژوهشکده علوم زمین ضمن هشدار نسبت به اقدام کشور امارات برای توسعه سواحل خود و پیشروی آن به سمت جزیره ابوموسی، گفت: علاوه بر آن مطالعات ما نشان می دهد که وجود جریان بسیار شدید جزر و مدی در تنگه خوران موجب شده که طی هزاران سال یک متر رسوبات در این منطقه باقی نماند ولی با ساخت پل خلیج فارس احتمال می‌رود که رسوبات واردشده از منطقه خارج نشود و آسیبی برای جنگل‌های حرا باشد.

به گزارش ایسنا، دکتر راضیه لک در نشست دو روزه افتتاح کرسی یونسکو با موضوع مخاطرات زمین شناختی ساحلی با بیان که در پیوست این کرسی از مطالعه در خصوص خلیج فارس با عنوان Persian Gulf استفاده شده است، افزود: این سند در سایت‌های سازمان‌های بین المللی بارگذاری شده است و این یک موفقیت برای ایران محسوب می‌شود که از سوی یک نهاد بین المللی نام «خلیج فارس» به ثبت رسیده است.

وی از جمله مخاطرات زمین شناختی ساحلی به مخاطرات ساحلی و دریایی استان هرمزگان اشاره کرد و افزود: بالا آمدن سطح آب دریا، تغییر اقلیم و خشک شدن برخی مناطق ساحلی، طوفان‌های گرد و غبار، مخاطرات زیست محیطی و آلودگی مناطق ساحلی و دریایی، آسیب دیدن اکوسیستم های حساس ساحلی، طوفان‌های حاره ای، لغزش های دریایی، مخاطرات مرتبط با فرسایش و رسوب گذاری و سونامی از جمله این مخاطرات ساحلی به شمار می روند.

لک، اطلاعات پایه را از نیازهای اولیه برای پایش این مخاطرات ذکر کرد و ادامه داد: برای پیشگیری و مقابله و یا سازگاری با مخاطرات دریایی نیاز به اطلاعات پایه مختلف در محیط های ساحلی و دریایی داریم که این اطلاعات توسط ارگان‌های دریایی به مانند سازمان بنادر و دریانوردی، سازمان شیلات، سازمان محیط زیست، سازمان زمین شناسی، سازمان جغرافیایی ارتش و همچنین دانشگاه‌ها و مراکز پژوهشی تولید می شود.

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نتایج مطالعات محقق ایرانی دانشگاه اشتوتگارت نشان داد

ازدست رفتن آبی معادل ۲۰ دریاچه ارومیه طی ۱۷ سال اخیر/مصرف آب‌های سطحی و استخراج آب‌های زیرزمینی

نتایج مطالعات ۱۷ساله محقق ایرانی دانشگاه "اشتوتگارت" نشان می‌دهد که در این بازه زمانی، کشور ۲۱۱ میلیارد متر مکعب آب از دست داده و به اعتقاد وی در راس همه عوامل موثر بر این رخداد، "عدم مدیریت منابع آبی" قرار دارد. این محقق همچنین اعلام کرد دنیا با افزایش پوشش‌های گیاهی این آب‌ها را به منابع زیر زمینی وارد می‌کند ولی در ایران جنگل‌ها و مراتع از بین می‌رود و ساختمان سازی می‌شود، در نتیجه آبی که در طی یک تا دو روز وارد سیستم می‌شود به سادگی تبدیل به سیل می‌شود و یا با ورود به دریا، تبدیل به آب شور می‌شود.

دکتر محمد جواد طوریان عضو هیات علمی دانشگاه اشتوتگارت آلمان در گفت‌وگو با ایسنا با اشاره به وضعیت منابع آبی ایران در ۲۰ سال اخیر گفت: به طور کلی بر همگان واضح و مشخص است که ایران در سال‌های اخیر حجم زیادی از منابع آبی خود را از دست داده است و اثبات این موضوع نیاز به شواهد و داده‌های ماهواره‌ای ندارد؛ چرا که هر ساله شاهد خشک شدن برخی از رودخانه‌ها و دریاچه‌ها و از دست رفتن بخشی زیادی از دریاچه‌ها هستیم. از این میان می‌توان به دریاچه ارومیه اشاره کرد که در سال‌های اخیر حتی در معرض خشکی کامل قرار داشته است.

وی ادامه داد: ولی اینکه ایران چه میزان منابع آبی را از داده است، همواره سوالی است که پاسخ دادن به آن ساده نیست؛ چرا که معمولا مشاهدات مطالعات هیدرولوژیکی، مبتنی بر میزان بارش سالانه، میزان سطح آب رودخانه‌ها و دریاچه‌ها، دبی رودخانه‌ها و سایر پارامترها است ولی اینکه چه میزان آب در منطقه‌ای وجود دارد و یا چه میزان آب در منطقه‌ای در سال‌های اخیر از دست رفته است را نمی‌توان از طریق مشاهدات میدانی تخمین زد.

طوریان، تنها راهکار پاسخ به این سوال را استفاده از داده‌های ماهواره ثقل سنجی گریس (GRACE) دانست و خاطرنشان کرد: کار این ماهواره، مشاهده میدان ثقل زمین است. توضیح اینکه میدان ثقل، میدانی دینامیک است و

۱۴۵۴۹۳
۱۴۰۲/۰۴/۰۴

جمهوری اسلامی ایران
وزارت فرهنگ و ارشاد اسلامی

بسم الله الرحمن الرحیم
«ن والقلم و ما یسطرون»

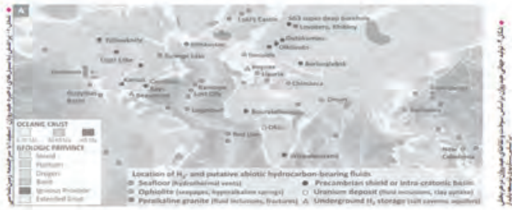
فرهیخته گرامی
جناب آقای حمید نظری

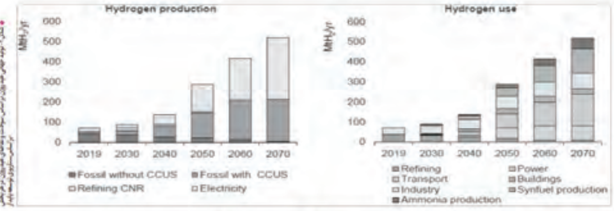
رشد و تعالی جوامع بشری مرهون قدرشناسی ذخایر علمی و برداشتن گام‌های استواری است که فرهیختگان و فرزانگان این مرز و بوم در درازای تاریخ پرافتخار این سرزمین برای پیشرفت و آسایش انسان پیموده‌اند.

بی‌گمان درنوردیدن مرزهای دانش، افق‌گشایی علمی و فتح قله‌های ترقی در عرصه‌های مختلف سیاست، راهبردی و مسیر غیرقابل بازگشت در تحقق اهداف گام دوم انقلاب اسلامی و رسیدن به تمدن نوین اسلامی، خواهد بود.

براین اساس کوشش ارزشمندتان را به سبب انتخاب کتاب «پارینه لرزه‌شناسی» به عنوان اثر شایسته تقدیر در «چهلمین جایزه کتاب سال جمهوری اسلامی ایران» ارج نهاده و مزید توفیقات شما را در عرصه علم و فرهنگ از درگاه خداوند متعال خواستارم.

محمدمهدی اسماعیلی
وزیر فرهنگ و ارشاد اسلامی





هیدروژن، انرژی راهبردی در سده ۲۱

اکتشاف ذخایر هیدروژن در سرزمین‌های افیولیتی ایران

حمید نظری
کرسی یونسکو در مخاطرات زمین‌شناختی ساحلی

شما آقای مدیر! آیا آماده‌اید؟

ادامه از صفحه اول

این زمین‌لرزه که از آن به‌عنوان سترگ‌ترین زمین‌لرزه ترکیه از سال ۱۹۹۹ میلادی و یکی از بزرگ‌ترین زلزله‌های ثبت‌شده منطقه در سده اخیر یاد می‌شود، در همبری پیوند سه‌گانه بین صفحات آناتولی، عربستان و آفریقا، در پهنه گسلی کسله فعال و لرزه‌زای آناتولی شرقی قرار دارد. پیش از شروع توالی زمین‌لرزه‌های ۱۷ بهمن ۱۴۰۱، از سال ۱۳۴۹ خورشیدی (۱۹۷۰)، تنها سه زمین‌لرزه به بزرگی شش یا بیشتر در فاصله ۲۵۰ کیلومتری از رومرکز کانونی زمین‌لرزه کنونی رخ داده است که بزرگ‌ترین آنها با بزرگی ۶.۷، در شمال خاوری زمین‌لرزه‌های ششم فوریه در ۲۴ ژانویه ۲۰۲۰ به ثبت رسیده است. زمین‌لرزه ۷.۵ ریشتری در زمین‌لرزه ششم فوریه بین گستره لرزه‌ای رویداد ۷.۸ ریشتری و رویداد ژانویه ۲۰۲۰ در امتداد با در همبری گسله آناتولی شرقی رخ داده است. برخلاف سکون نسبی لرزه‌ای ناحیه مرکزی زمین‌لرزه‌های ششم فوریه جنوب ترکیه، حلب در شمال سوریه در پیشینه تاریخی خود با زمین‌لرزه‌های ۷.۱ و ۷.۰ ریشتری سال‌های ۱۱۳۸ و ۱۸۲۲ میلادی به ویرانی کشیده شده است.

زمین‌لرزه‌های آغازین روزهای بهمن‌ماه ۱۴۰۱ شهرستان خوی و نواحی پیرامونی آن که به احتمال زیاد از جنبش دوباره پاره گسله جنوبی گسل موسوم به گسله کیلاتو -سیه‌چشمه- خوی با راستای تقریبی شمال باختری-جنوب خاوری و در ازای کل نزدیک به ۱۴۰ کیلومتر با گذر از شهر خوی به گواه گذشته لرزه‌ای خود فقط در همین قطعه از سامانه گسلی توان لرزه‌ای تولید زمین‌لرزه‌هایی با بزرگای شش ریشتر را دارد که از نیمه‌سده پیش شناخته شده و به تکرار در انتشارات سازمان زمین‌شناسی و اکتشافات معدنی و پژوهشکده علوم زمین بروشنی قابل رهگیری است. اگرچه شاید لازم به یادآوری دوباره نباشد که در این مورد اخیر نیز مانند دیگر گزارش‌ها و هشدارهای رسمی و غیررسمی درباره گریز ناگزیر آسیب‌پذیری جای‌جای ایران‌زمین از جمله پایتخت، کلان‌شهرهایی مانند کرج، تبریز و مشهد، شهرها و روستاهای کشور در رویارویی با زمین‌لرزه احتمالی آینده و پیامدهای آن، درخواست تأمین اعتبار (هرچند اندک!) با پشتیبانی از انجام مطالعات تکمیلی مورد نیاز زمین‌شناسی زمین‌لرزه، مورد بی‌توجهی غیرقابل باور و پشت‌هم‌اندازی‌های مکرر به‌گونه‌ای نهادینه‌شده در نزد تصمیم‌سازان وقت مانند مسئولان دیروزشان با صاحب‌منصبان امروزشان، در سطح استانی و چه در سازمان‌های «حاکمیتی» در مقیاس کشوری قرار گرفت!

ویژگی‌های زمین‌شناختی، جامعه‌شناختی مجموعه زمین‌لرزه‌های رخ‌داده در بهمن‌ماه در دو سوی مرز ایران و ترکیه شاهد و تأکیدی دوباره است بر دومینوی لرزه‌خیزی و آسیب‌پذیری گسترده منطقه که با مدیریت کهنه و ناهنجار شهری، ناشی از نبود باورمندی بر برنامه‌ریزی دانش‌پایه، سرمایه‌گذاری مستمر در تجهیز و هزینه‌کرد در پژوهش‌های هدفمند برای تهیه روزآمد نقشه راه علمی در مسیر توسعه پایدار و تاب‌آوری اجتماعی به دور از هرگونه خرافات در جرایی حوادث طبیعی به زشتی رخ می‌نماید.

تردیدی نیست که در این میان شایعات، پیش‌بینی‌ها، بیهوده‌گویی‌ها با مقایسه‌های غیرعلمی زمین‌لرزه‌های رخ‌داده با زمین‌لرزه‌های دیگر کشورها برای نمونه ژاپن بدون کمترین توجه به گوناگونی ویژگی‌ها و تفاوت‌های لرزه‌زمین‌ساختی، نزد اهل فن و خرد همچون تی‌تاکوک و چون آبی بر کهنه آسیاب شکسته جهل پیشگان برکو در تناقض ماهوی با انفجار دانایی در سده ۲۱ است.

از این میان، پیش‌بینی‌های احتمال رخ‌دادن زمین‌لرزه در شهرهای تبریز یا استانبول ناشی از سری زمین‌لرزه‌های سترگ ۱۷ بهمن جنوب ترکیه در فضای مجازی یا در مصاحبه‌های کلیشه‌ای رایج مشابه با آنچه پس از هر رویداد زلزله از تریبون‌های گوناگون دیده می‌شود (بدون توجه به سازوکار و ویژگی‌های زمین‌ساختی و لرزه‌ای) در همین شمار قابل دسته‌بندی است.

با توجه به هندسه و سازوکار سامانه گسله‌های جنبا و لرزه‌زای کیلاتو -سیه‌چشمه- خوی در شمال باختری ایران و گسله شرق آناتولی در جنوب ترکیه پربیراه نیست اگر چنین نتیجه‌گیری شود که «اگر» در صورت همبستگی جنبشی-رانشی دو سامانه گسلی یادشده، پس از زمین‌لرزه هشتم بهمن خوی، شاهد رخ‌دادن زمین‌لرزه‌های شوم و ویرانگر ۱۷ بهمن غازی‌آنتپ نمی‌بودیم! احتمال انتقال و جابه‌جایی تنش انباشته ناشی از جنبش راستگرد پس از زمین‌لرزه‌های خوی به‌سوی شهرهایی مانند مرند، تبریز و حتی شاید شهر مراغه و پهنه خاوری دریاچه ارومیه و حتی بخش‌های جنوبی‌تر آن نیز ناممکن نمی‌بود! درحالی‌که با توجه به الگوی توزیع و رهایی جیگرد تنش و با توجه به آرایش مکانی و جانمایی دو زمین‌لرزه اصلی ۱۷ بهمن ترکیه و پس‌لرزه پیامد آن، شواهد نوزمین‌ساختی بیشتر نشان از احتمال رخداد لرزه‌ای آتی -نه در استانبول- که بر یکی از دو شاخه گسلی مرز لبه قاره‌ای عربی-آفریقایی در مدیترانه خاوری (پهنه آبی یونان) و با احتمال بیشتر در گستره جغرافیایی بخش کرانه‌ای سوریه، لبنان، دریای مرده، اردن، کرانه باختری و اسرائیل خواهد بود. پیش‌بینی کوتاه‌مدت زمین آرزوی دیرین انسان است که برخلاف پیش‌بینی‌هایمان و درازمدت با دانش امروز هنوز به‌صورت عملی فراهم نیامده است ولی بر پایه داده‌های موجود از مطالعات زمین‌ساختی، پارینه‌لرزه‌شناسی و ژئودتیک، زمان چنین رخدادی همچنان در هاله‌ای از ابهام و عدم قطعیت برای بازه زمانی از چند سال تا چندده سال آینده قابل انگاشت خواهد بود.

از دیگر نکات لازم به یادآوری اینکه پس از رخداد زمین‌لرزه بهار ۱۳۹۴ خورشیدی (آوریل ۲۰۱۵) پایتخت نپال با بزرگای ۷.۶ در مقیاس ریشتر یکی از شهرهای سه‌گانه با خطر بالای لرزه‌ای با احتمال رخداد نزدیک: کاتماندو، تهران و استانبول، پایتخت ایران و شهرهای پیرامونی آن با جمعیتی نزدیک به ۱۵ میلیون نفر و پایتخت اقتصادی ترکیه با جمعیتی حدود ۱۶ میلیون نفر همچنان در کانون سرنوشت هراسناک خود در رویارویی با زمین‌لرزه ناگزیر آینده به سر می‌برند. از این میان برخلاف تهران، استانبول با اتکا بر سیاست راهبردی بر مدیریت غیرامنیتی، با توجه به ویژگی‌های یگانه جغرافیایی این کلان‌شهر در پیوندگاه دو خشکی آسیا و اروپا با پیوستن به شبکه سوپرسایت جهانی (شبکه آزمایشگاه طبیعی) از سال ۲۰۱۴ در تعاملی بین‌المللی و پویا، ضمن بهره‌مندی از خدمات پشتیبانی آموزشی جهانی، انتقال دانش و فناوری و جذب نیروی انسانی متخصص، بیشترین رکورد جذب سرمایه و امکانات نرم و سخت‌افزاری را از آن خود کرده است.

شبکه موسوم به سوپرسایت با شبکه آزمایشگاه‌های طبیعی مخاطرات زمین‌شناختی یک مشارکت بین‌المللی داوطلبانه با هدف بهبود سازوکار تربیت و آموزش نیروی انسانی کارآمد و ارتقای دانشگاه‌ها و مراکز پژوهشی در اجرای پروژه‌های مطالعاتی و مدیریت بحران، با رویکرد اشتراک و دسترسی آزاد دانش، پژوهش‌های علمی در حوزه مخاطرات زمین‌شناختی، ارزیابی، ترویج و جذب سریع و مؤثر نتایج علمی نوین برای افزایش بهره‌مندی عمومی در کاهش خطر بلایای طبیعی در مقیاس منطقه‌ای و جهانی است.

گرچه منزل بس خطرناک است و مقصد بس بعید/ هیچ راهی نیست کان را نیست پایان غم مخور (حافظ شیرازی).

• عضو هیئت علمی و رئیس کرسی یونسکو در مخاطرات زمین‌شناختی ساحلی، پژوهشکده علوم زمین

تغییرات اقلیمی و کنوانسیون‌های بین‌المللی آب‌وهوایی

حمید نظری*

تاریخ سیاره ما، زمین، سرشار از رویدادها و دگرگونی‌های شگفت‌انگیزی است که دنیای امروزی را شکل داده است. یکی از مهم‌ترین و دراماتیک‌ترین پدیده‌های تاریخ زمین، رویدادهای انقراض دسته‌جمعی است. این

برنامه‌ریزی سازمان ملل متحد در برابر تغییرات اقلیمی

افزون بر رویدادهای تاریخی نابودی‌های جهانی و انقراض گروهی، امروزه دانشمندان نگرانی‌هایی را درباره ششمین رویداد انقراض دسته‌جمعی دارند. باور بر این است که این رویداد بیشتر ناشی از فعالیت‌های انسانی است. تخریب زیستگاه، جنگل‌زدایی، بهره‌برداری بیش از حد از منابع، آلودگی، تغییرات آب‌وهوایی و دیگر عوامل انسانی منجر به از دست دادن در خور توجه تنوع زیستی در سراسر جهان می‌شود. نرخ انقراض گونه‌ها بسیار بیشتر از نرخ مرگ‌ومیر پس‌زمینه طبیعی برآورد می‌شود. ازاین‌رو تلاش‌های فوری حفاظتی و شیوه‌های پایدار برای کاهش بحران جاری

THESIS

1 Student: Hassan Afshari

Supervisor: Dr. Hassan Fazeli Nashli

Dr. Hamid Nazari

Advisor: Mojtaba Safari

Name of Thesis: “An investigation of cultural transformation and its relationships between the climatic and environmental changes in the southeastern Caspian Sea from the Mesolithic to the Early Neolithic period”

Start: September 2022

2 Student: Mojtaba Kavianpour

Supervisor: Dr. Hossein Mahmoudi Gharaei, Dr. Razyeh Lak

Advisor: Dr. Hamid Nazari

Name of Thesis: “Investigation of Sedimentology and geochemistry characteristic of South Gorgan Bay coastal zone (Caspian Sea)”

Start: 2021

PUBLICATION ARTICLE

Full papers (JCR, SCOPUS and WOS) 2023- RIES Members:

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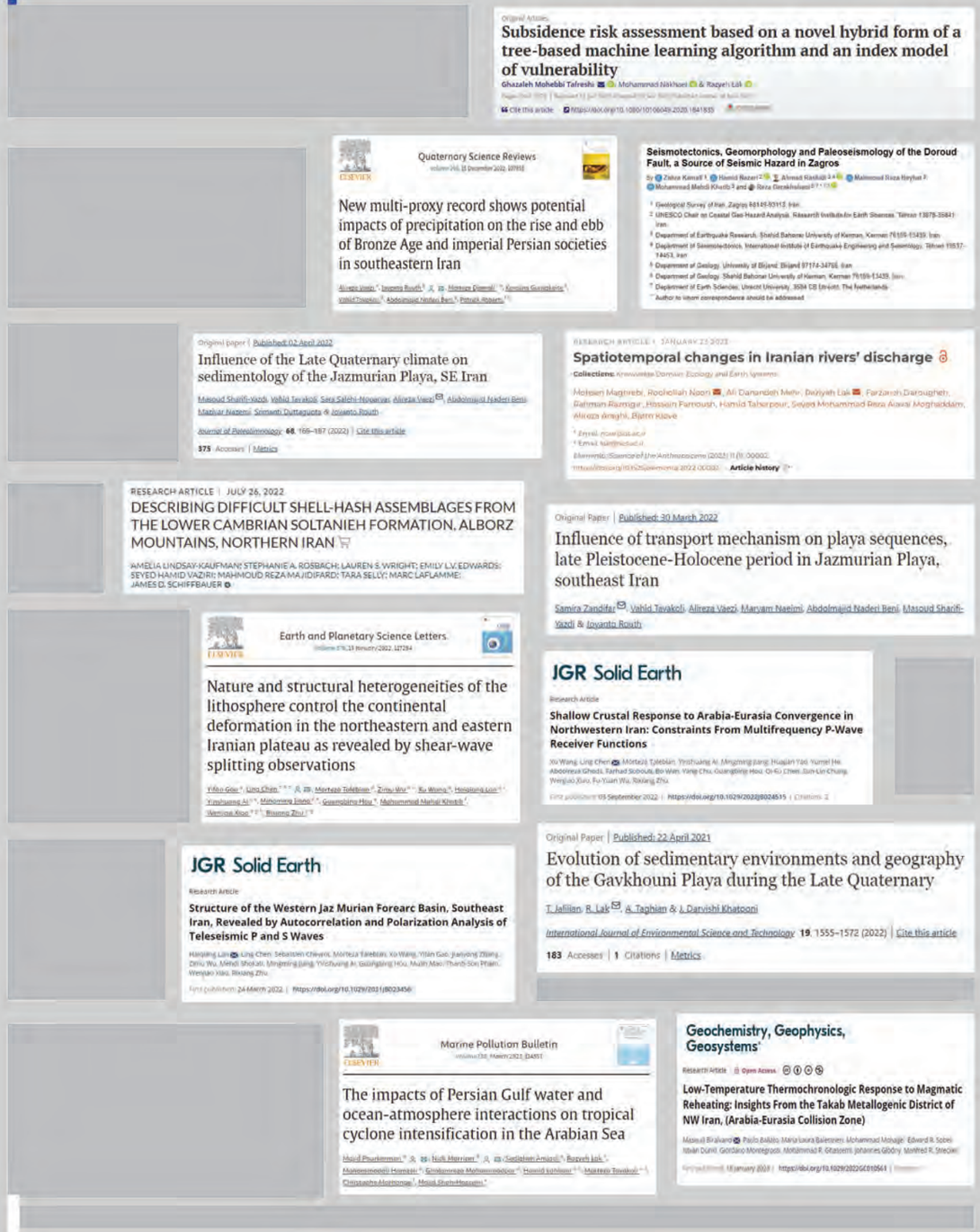

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FURTHER PLANNING, UCCGHA 2024

In line with the international community and in line with the objectives of the Paris Agreement and the Glasgow Conference against Global Warming and Climate Change, the UCCGHA is also active by ideation, design and programing to provide the necessary platform in the field of interdisciplinary sciences in the use of Artificial Intelligence and Deep machine learning, what make UCCGHA enabled for launching multidisciplinary geological projects, like the preparation of homogenized, thematic server based geological mapping and also social activity in media for public and governmental encouragement in studies and exploration of renewable energy, specially about "white hydrogen" as a clean resources for the energy in 21th century.

Thus, the UNESCO Chair on the Coastal Geo-Hazard analysis in the coming year (2024), follows its structural development in the past year, the implementation of public education programs, the continuation and completion of ongoing projects, is always determined to develop its network.