

PROCEEDINGS

**INQUA IFG 1709 POCAS Third Plenary
Meeting
“Ponto-Caspian Stratigraphy and
Geochronology”
(2017-2020)**

Tehran ◆ INIOAS ◆ 2019



INQUA IFG 1709 POCAS

October 11-18, 2019, Tehran, I.R. Iran

PROCEEDINGS

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Avalon Institute of Applied Science, Winnipeg, Canada

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AIMS AND SCOPE

The INQUA IFC (International Focus Group) POCAS continues a series of projects (UNESCO-IUGS-IGCP 521, 610; INQUA 501 - <http://avalon-institute.ca/projects/>) devoted to the Environmental Change and Human Response in the Caspian-Black Sea-Mediterranean Corridor (CORRIDOR) during the Quaternary. The CORRIDOR is considered as a single geographic entity (Fig. 1).

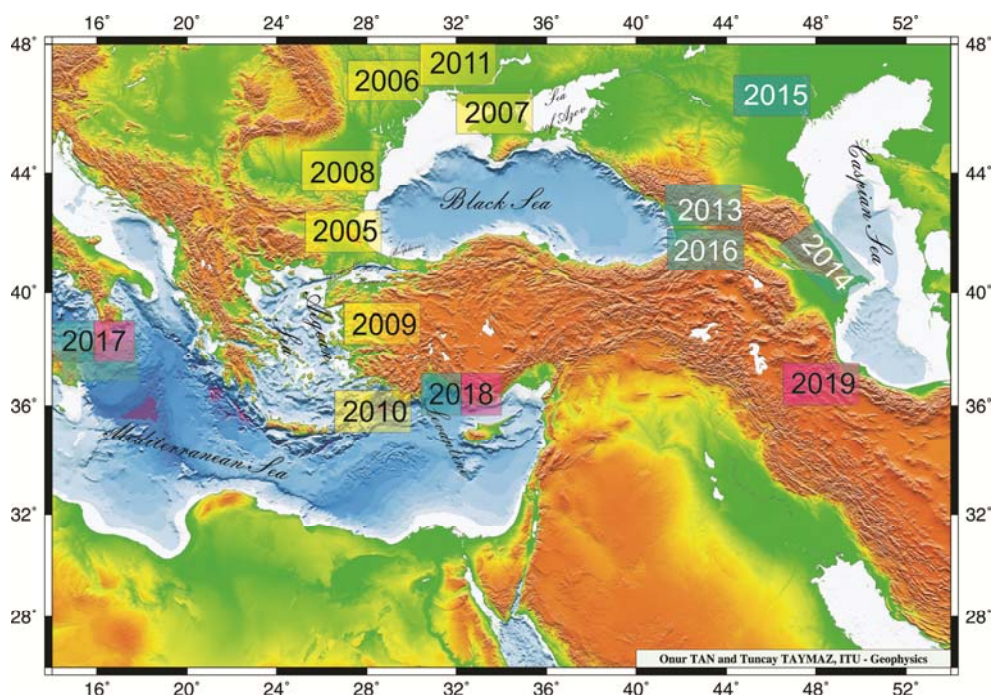


Figure 1. The Caspian-Black Sea-Mediterranean “CORRIDOR” with locations the Plenary Meetings and Field Trips: in yellow - IGCP 521-INQUA 501 (2005 – Istanbul, Turkey; 2006, 2011 – Odessa, Ukraine; 2007 – Gelendzhik, Russia; 2008 – Bucharest, Romania and Varna, Bulgaria; 2009 – Ismir, Turkey, 2010 – Rhodes, Greece); in green – IGCP 610 (2013 – Tbilisi, Western Georgia; 2014 – Baku, Azerbaijan; 2015 – Astrakhan’ (Volga Delta), Russia; 2016 – Tbilisi, Eastern Georgia), in green and pink – IGCP 610 and INQUA IFG POCAS (2017 – Palermo, Italy; 2018 – Antalya, Turkey), in pink - INQUA IFG POCAS (Tehran, I.R. Iran)

The project established an international team of multidisciplinary scientists (about 300 people from 27 countries) working in close relation bypassing linguistic/political/disciplinary boundaries, linking continents (Europe and Asia) more closely, and encouraging East-West dialogue and cooperation among researchers

The INQUA IFG 1709F POCAS was created within the INQUA SACCOM for the term 2017-2020. It is concentrated on in-depth study of Quaternary stratigraphy and geochronology in the Ponto-Caspian region. The Ponto-Caspian is defined here as a chain of intercontinental basins that encompasses the Caspian, Black, Azov seas, the Kerch Strait, the Manych Valley, and their coasts. This chain represents a unique oceanographic system of relict Paratethys basins which were repeatedly connected and isolated from each other during the Quaternary. This predetermined their environmental conditions and hydrologic regimes, and imposed specific impacts on diverse biological populations. Due to its geographical location and semi-isolation from the open ocean, this region acts as a paleoenvironmental amplifier and a

sensitive recorder of climatic events, in particular glacial-interglacial cycles on the Eastern European Plain and mountains, as well as transgressive-regressive sea-level variations of the World Ocean; thus, it can be considered as a stratotype region where geological history is well recorded in a long series of marine and continental sediments to be used for the development of the Pleistocene stratigraphy and geochronology of the Northern Eurasia.

The Quaternary stratigraphy and geochronology in the Ponto-Caspian dates back to the XIX century. The basic stratigraphic scale was first suggested by N.I. Andrusov and then modified by numerous researchers. This scale is based on the study of outcrops, many of which represent stratotypes for certain stratigraphic units, that were formed on the sea bottom and later exposed by tectonic uplift on coastal terraces. Many of them were observed during abovementioned projects.

The main goal of the INQUA IFG 1709F POCAS is to provide in-depth interdisciplinary study and correlation of the Ponto-Caspian stratotypes and other important outcrops exposed in the field trip localities and to assemble existing and newly obtained data in the up-to-date catalogue supplemented by their pictures, coordinates, lithological, paleontological and paleoecological records, stratigraphic division, and absolute datings. As an additional bonus, this project continues tradition to observe archaeological and paleoanthropological records in each particular part of the CORRIDOR where fieldwork takes place.

The First and Second Plenary Conference and Field Trip of the INQUA IFG 1709F POCAS were carried out in Italy (Palermo) and Turkey (Antalya) jointly with IGCP 610 in order to bring the international communities of both projects together to solve a number of contentious issues involving stratigraphy, geochronology, geological history, archaeology, and anthropology of the CORRIDOR. The IGCP 610 project was completed in 2018. The Third Plenary Conference of the INQUA Focus Group POCAS will be carried out in I.R. Iran (Tehran). It will focus on the late Miocene-Plio/Pleistocene geological history of the South Caspian Coast, Iran along the West Alborz Mountains. This subject is very important in shedding light and achieving a better understanding of tectonic-climatic interactions during the Plio/Quaternary period in this region.

The meeting will cover six days in total. Two days (12-13 October) will be spent in Plenary Sessions, and four days (14-17 October) will be dedicated to the Field Trips (Fig. 2).

The Plenary Sessions, social activities and side-meeting round tables will be held in INIOAS headquarter in Tehran, I.R. Iran. Accommodation is considered in Hotel Hijab/Hotel Alborz, in proximity of the meeting location. The two days of the Meeting will be devoted to oral presentations and posters, and four days will be devoted to geological field trips that focus on of the Miocene, Plio-Quaternary outcrops and archaeological sites.

It is expected that the meeting will bring together multidisciplinary scientists from all over the world to enhance the West-East scientific dialogue and provide a foundation for collaboration on correlation and integration of subjects covered by the conference as previous IGCP 521, 610, and INQUA 0501 meetings have done.

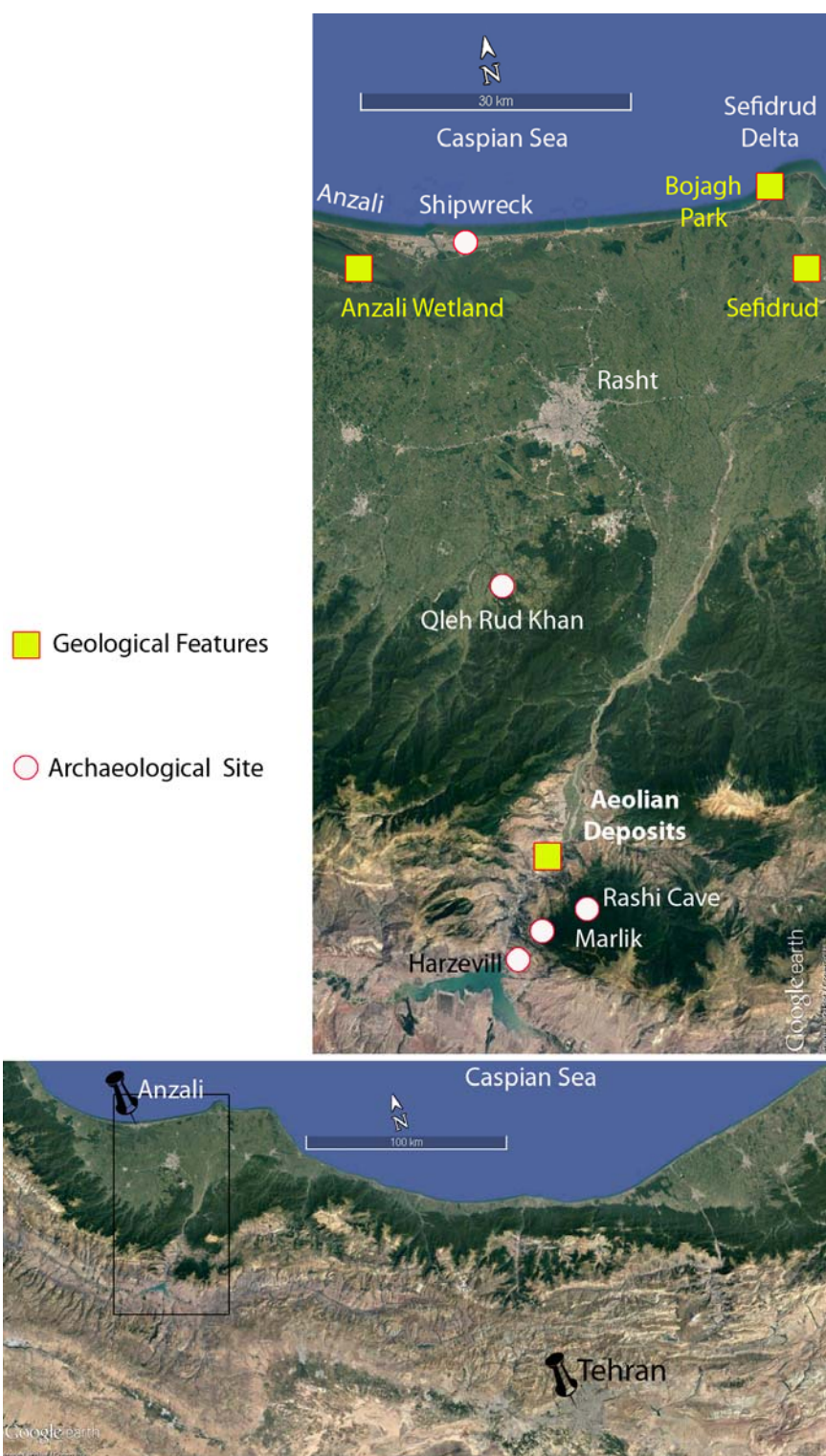


Figure 2. Field trip locations planned to be visited during the INQUA IFG 1709F POCAS meeting

WELCOME

On behalf of the Organizing and Executive Committees as well as the University of Palermo, Italy, and Avalon Institute of Applied Science, Canada, we are delighted to welcome you to

the Third Plenary Meeting and Field Trip of INQUA IFG 1709F POCAS that will be held in Tehran and Guilan Province, I.R. Iran, on 11-18 October 2019

It is expected that the joint conference will bring together multidisciplinary scientists from all over the world and in the process enhance West-East scientific dialogue by providing a supportive background for collaboration regarding the correlation and integration of discoveries on the influence of climatically/tectonically induced sea-level changes and coastline migration on humanity. This is an area of strategic importance not only for all coastal countries but also for at least 17 other countries sharing a drainage basin that is one-third the size of the European continent.

The Meeting has been organized and sponsored by the Iranian National Institute for Oceanography and Atmospheric Science, Geological Survey of Iran, and Avalon Institute of Applied Science, Winnipeg, Canada.

We are happy to welcome to I.R. Iran distinguished specialists and students in the Humanities, Earth, and Life Sciences from countries around the world.

We wish you a very pleasant stay in I.R. Iran.

Sincerely,

Organizing and Executive Committees

VENUE

The plenary meeting will be held at the Iranian National Institute for Oceanography and Atmospheric Science (INIOAS) (Persian: پژوهشگاه ملی اقیانوس شناسی و علوم جوی Pazhoheshgah e Melli e Oghianoos Shenasi va Oloum e Javvi) meeting room in the center of Tehran, 3 Etamadzadeh St., West Fatemi Ave., Tehran, I. R. Iran) (Fig. 2).

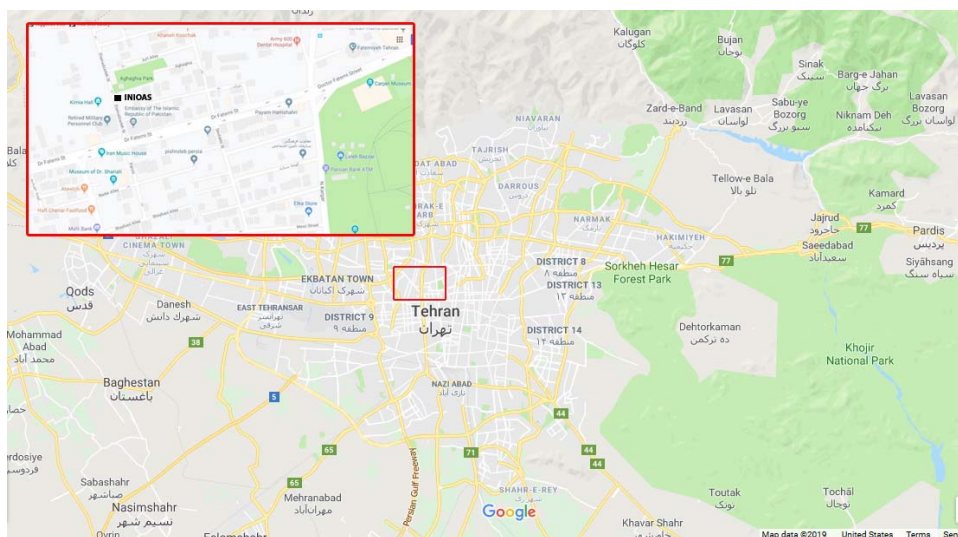


Figure 2. Tehran map.

The INIOAS is located between two major universities, Tabiat Modares Univ. in the north around 300 m and Tehran University in South around 700 m. Here we use orientation by geographical directions as very high mountains of Alborz located in the north of Tehran

The INIOAS is a research center established by Iran's Ministry of Science, Research and Technology in 1992 under the name 'Iran Oceanography Center' to perform research in the

field of oceanography. In March 2010, the organization was renamed to 'Iranian National Center for Oceanography (INCO)'. In June 2013, the organization was again renamed to 'Iranian National Institute for Oceanography and Atmospheric Science (INIOAS).

Upon its completion, INIOAS will have the Khalije Fars sea explorer at its disposal to conduct oceanographic research.

Tehran is the capital of Iran and Tehran Province. With a population of around 8.7 million in the city and 15 million in the larger metropolitan area of Greater Tehran, Tehran is the most populous city in Iran and Western Asia, and has the second-largest metropolitan area in the Middle East. It is ranked 24th in the world by the population of its metropolitan area.

In the Classical era, part of the territory of present-day Tehran was occupied by Rhages, a prominent Median city. It was subject to destruction through the medieval Arab, Turkic, and Mongol invasions. Its modern-day inheritor remains as an urban area absorbed into the metropolitan area of Greater Tehran.

Tehran was first chosen as the capital of Iran by Agha Mohammad Khan of the Qajar dynasty in 1796, in order to remain within close reach of Iran's territories in the Caucasus, before being separated from Iran as a result of the Russo-Iranian Wars, and to avoid the vying factions of the previously ruling Iranian dynasties. The capital has been moved several times throughout the history, and Tehran is the 32nd national capital of Iran. Large scale demolition and rebuilding began in the 1920s, and Tehran has been a destination for mass migrations from all over Iran since the 20th century.

The majority of the population of Tehran are Persian-speaking people, and roughly 99% of the population understand and speak Persian, but there are large populations of other ethno-linguistic groups who live in Tehran and speak Persian as a second language.

Tehran has an international airport (Imam Khomeini Airport), a domestic airport (Mehrabad Airport), a central railway station, the rapid transit system of Tehran Metro, a bus rapid transit system, trolleybuses, and a large network of highways.

More information about Tehran and its surroundings is available at the following website:

<https://en.wikipedia.org/wiki/Tehran>

ACKNOWLEDGMENTS

We gratefully acknowledge the support and hospitality of the Iranian organizers, the the Iranian National Institute for Oceanography and Atmospheric Science for hosting the Third Plenary Meeting and Field Trip of INQUA IFG 1709F POCAS. Support has also been received from the Avalon Institute of Applied Science, Canada.

We are indebted also to Behrooz ABTAHI and Hamid LAHIJANI the President and the Chairman of the Organizing Committee of the Conference, for the extraordinary efforts in organizing the conference and field trips.

Furthermore, we are also very grateful to Zahra NEZHADFALLAH, Executive Secretary, and Fahimeh FOROGHI, member of the Organizing Committee of the Conference.

We gratefully recognize the assistance of Prof. Dr. Valentina YANKO-HOMBACH for layout of the Conference Proceedings.

To the Scientific Committee, we offer sincere thanks for evaluating submissions and managing the abstract review process.

*The Third Plenary Meeting and Field Trip of INQUA IFG 1709F POCAS, Tehran and Guilan
Province, I.R. Iran, 11-18 October 2019*

For her prompt action, we extend our appreciation to the Project and website administrator Dr. Irena MOTNENKO.

Prof. Dr. Valentina Yanko-Hombach

Leader of INQUA POCAS Focus Group

Executive Director of the Meeting