

Tectonic and Stratigraphic Evolution of Zagros and Makran during the Mesozoic–Cenozoic

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Tectonic and Stratigraphic Evolution of Zagros and Makran during the Mesozoic–Cenozoic

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MIDDLE
EAST
BASINS

EVOLUTION PROGRAMME



Preface

The Middle East Basins Evolution (MEBE) Programme was a 4 year consortium (2003–2006) funded by the major oil companies (BP, ENI, PETRONAS, SHELL and TOTAL) and by the French research organizations (INSU-CNRS and UPMC). This multidisciplinary study of the Middle East, spanning the Arabian–Peri-Arabian and Caucasian–Caspian areas, was led by E. Barrier (CNRS–Université Pierre et Marie Curie, Paris, France) and M. Gaetani (University of Milan, Italy). Its focus was the geodynamic evolution of the area, particularly since the Late Palaeozoic, and emphasized dating. This provided considerable details on the regional kinematics, plate-tectonic models and geodynamic evolutions of the area. The MEBE Programme brought together about 300 scientists from 28 countries, representing 100 universities and research organizations.

To prepare regional syntheses, the MEBE Programme established eight working groups comprising MEBE participants and external regional specialists. The MEBE working groups were focused regionally (Zagros, South Caspian Basin–central Iran, Caucasus, Black Sea, Levantine and East Arabian margins) and on products (stratigraphic comparisons, lithospheric cross-sections). From 2003 to 2005, 26 scientific projects were funded in 14 countries of the Middle East, including the Black Sea, Caucasus, northern Iran, the Zagros, the Arabian margins and the Levant domains.

About half of the MEBE projects were located in Iran because of the pivotal importance of several regions of this country to both scientific and hydrocarbon interests, as well as the continuous support by the Geological Survey of Iran (GSI).

Workshops were a key element in the MEBE Programme. The first one was held in Kiev in February 2006 by the Black Sea Working Group; the Caucasus Working Group met in Ankara in September 2006. A programme-wide workshop in Milan in December 2006 gathered the Zagros, East Arabian margin, South Caspian Basin–central Iran and Stratigraphic Comparisons MEBE Working Groups. The last workshop was held in Paris in December 2006 by the Levant Working Group. An important documentation of the MEBE activities was given during the 2007 EGU General Assembly in Vienna, where a special MEBE session was held.

The results of the programme, as well as the MEBE GIS database, were presented by way of 70 communications during the final MEBE meeting held at the Université Pierre et Marie Curie (Paris) in December 2007. The principal MEBE products are an atlas of 14 palaeotectonic maps, published

by the Commission for the Geological Map of the World (CGMW), showing the geodynamic and tectonic evolution of the Middle East between the Late Triassic and the present, and a series of four Geological Society of London Special Publications presenting the results of the regional MEBE working groups.

The four volumes cover the Black Sea–Caucasus, the South Caspian–central Iran, the Zagros–East Arabian margin and the Levant. The present volume presents new data and results on sedimentology, stratigraphy, biostratigraphy, tectonics and kinematics in the Zagros fold belt and the adjacent Makran accretionary prism. The teams involved were sponsored either by the MEBE Programme or by other programmes.

The volume covering the geodynamic evolution of the region from the South Caspian Basin to northern and central Iran, entitled *South Caspian to Central Iran Basins*, is edited by M. F. Brunet (CNRS, Université Pierre et Marie Curie, Paris, France), M. Wilmsen (Friedrich-Alexander-Universität, Erlangen–Nürnberg, Germany) and J. W. Granath (Granath & Associates Consulting Geology, USA). The volume presents detailed results of new fieldwork on the South Caspian Basin, which is among the deepest sedimentary basins in the world, and more precisely on the margins of the South Caspian Basin, where inversion during the Cenozoic stages of the Arabia–Eurasia collision has exposed the rock record in the Alborz, Koppeh Dagh and Binalud mountains in northern Iran, as well as the eastern extent of the Greater Caucasus.

The volume covering the Black Sea to the Caucasus, entitled *Sedimentary Basin Tectonics from the Black Sea and Caucasus to the Arabian Platform*, is being edited by R. Stephenson (University of Aberdeen, UK), N. Kaymakci (Middle East Technical University, Ankara, Turkey), M. Sosson (CNRS, University of Nice, France), V. Starostenko (Institute of Geophysics, National Academy of Sciences of Ukraine, Kiev, Ukraine) and F. Bergerat (CNRS–Université Pierre et Marie Curie, Paris, France). The volume presents detailed results of new fieldwork, as well as syntheses of the tectonic evolution of the Black Sea–Caucasus area (Greater Caucasus, Lesser Caucasus, South and East Anatolia, margins of the Black Sea) constrained by an integration of the newly obtained and previously published data.

The fourth volume, *Evolution of the Levant Margin and Western Arabia Platform since the Mesozoic*, edited by C. Homberg (Université Pierre

et Marie Curie, Paris, France) and M. Bachmann (University of Bremen, Bremen, Germany), will cover improvements in our knowledge of the tectonic, stratigraphic and environmental evolution of the Levant Basin and its margins since the Mesozoic.

In summary, the MEBE Programme provides a significant contribution of high-quality geological

data at inter-regional scales and a considerable advance in the knowledge of the regional geology. These results will strongly contribute to new interpretations of the geodynamic evolution of the whole Middle East.

PASCALE LETURMY
CÉCILE ROBIN