Arab Republic of EGYPT
Ministry of Higher Education

Egyptian National UNESCO Commission
(UNESCO – ALECSO – ISESCO)

Egyptian National MAB Committee

NATIONAL REPORT

EGYPT
7, Ibrahim Aboul-Naga St., ext from Abbas El-Akkad St.,
Madinat Nasr, Cairo

website
http://www.egnatcom.org.eg

email: casm@imcu.sti.sci.eg

2016-2017

April 2017
**I- Winners of Egyptian MAB Young Scientists Research Awards Offered by the Ministry of Higher Education:**

The following six research projects were selected by the Egyptian National MAB Committee and each was offered a sum of 5000 LE:

1. Mr. Hany Saber Mohamed. South Valley University. 
   **Research Title:** Species Composition and Distribution of Soil Algae in Wadi Allaqi Biosphere Reserve (South Eastern Desert, Egypt).

2. Miss. Areig Yehia Abdel Aty. Wadi Allaqi Biosphere Reserve
   **Research Title:** The impact of environmental changes on the gene flow of the critically endangered *Medemia argun*, Wadi Allaqi Biosphere Reserve

3. DR. Abdul Allah Anter Saber, Ain Shams University.
   **Research Title:** Combined detailed molecular, morphological, and cophysiological study on an interesting species of the genus *Cloniophora tiffany* (Cloniophoraceae, Ulvales) from Wadi El-Rayan Protected Area (El-Fayium).

   **Research Title:** Development controls in rocky islands in Aswan.

5. Iman Abdel Azim Abdel Rahman. Cairo University.
   **Research Title:** Using and evaluating the ENVI-met Model to simulat the impact of global warming on the micro climate of Biosphere Reserves (case study: Some Nile Islands).

   **Research Title:** Environmental study for monitoring the impact of human activities on biodiversity of Burullus Lake, Egypt.

**II- Recent publications about Omayed and Allaqi BRs.**


In this study the effect of recent land uses on the vegetation structure and species composition of Omayed Biosphere Reserve was evaluated. Also alien plants species were identified and their impacts on biodiversity were elucidated. One hundred and ninety stands were selected monthly, during the years 2010-2013. A sum of 145 species were recorded (69 perennials and 76 annuals) related to 83 genera, 40 families in 9 identified. Three habitat groups resulted after the application of TWINSPLAN and DCA as classification and ordination techniques. Two groups represented the natural habitats and one represented the urban and cultivated habitats. Datta collected revealed that coastal dunes had the highest species richness (α-diversity),
followed by cultivated lands. Inland plateau had the lowest; but saline depressions had the highest species turnover (β-diversity). Non-saline depressions had the highest relative evenness, while saline depressions had the highest relative concentration of dominance. Results also showed that twenty two alien plant species were recorded in OBR. The recent land use (overgrazing, wood cutting and collecting, construction of summer resorts and irrigation canals and agricultures) led to the emergence of new invasive species, which may severely affect the plant diversity and community structure of this hot spot of biodiversity in Egypt.


Medemia argun is a rare fan palm of tribe Borasseae. Knowledge about the species was first based on the discovery of its fruits in many ancient Egyptian tombs. Since the discovery of M. argun living in northern Sudan in 1837, then in Egypt in Nakhila Oasis in 1901 and in Dungul Oasis in 1963; no more records were reported for decades either in Egypt or Sudan and it was almost considered globally extinct. Other records in Egypt were later reported in tributaries of Wadi Allaqi in 2006. The ambiguity about the status of this species stimulated the current study aiming at predicting the potential distribution of M. argun using remotely sensed data. Spectral variables derived from Landsat 8 data and land-surface parameters were used for building the prediction model by applying both GLMs and random forests techniques. The results showed that random forests provided more accurate prediction of the species distribution which is confined to the Nubian Desert. It is hoped that the outcomes form the current study would help in providing more protection to the sites where the species exists.


In this account land use/land cover (LULC) changes in part of the northwestern desert of Egypt, including Omayed Biosphere Reserve, using the Markov-CA integrated approach to predict future changes. LULC distribution of the desert landscape for 1988, 1999, and 2011 were mapped. Landsat Thematic Mapper 5 data and ancillary data were classified using the random forests approach. Analysis of LULC classes from the three dates revealed that the study area was subjected to three different stages of modification, each dominated by different land uses.
Markov-CA was used to predict land use change in 2011 and project changes in 2023 by extrapolating current trends. The technique was successful in predicting LULC distribution in 2011 and the results were comparable to the actual LULC for 2011. The projected LULC for 2023 revealed more urbanization of the landscape with potential expansion in the croplands westward and northward, an increase in quarries, and growth in residential centers.

III- Egypt MAB Bulletin

Published Issues:
Issue (1&2) 2015:
Tourism Economics in African World Heritage Sites
Issue (3&4) 2015:
Sustainable Development Goals (SDGs) 2015- 2030
Issues to be published in 2016- 2017
Issue (1&2) 2016:
Wetlands and Carbon sequestration (in Press)
Issue (3&4) 2016:
World Heritage Terms in African Languages

IV- Changes and revisions of Omayed Biosphere Reserve (OBR) based on the recommendation of the International Advisory Committee for Biosphere Reserves (IACBR)

Egyptian MAB Committee (Nat-MABCOM) acknowledged the report of the UNESCO-MAB Advisory Committee and the recommendations that came through its meeting of January 2017 regarding OBR. In response to these recommendations the Nat-MABCOM has contacted the concerned executive authorities at the Nature Conservation Sector of the State Ministry of Environment and compiled the following responses to comply with the Lima Action Plan (LAP).

- A detailed study on OBR to assess current biodiversity status and the level of land use transformation was conducted by experts from Faculty of Science, Alexandria University including Prof. Boshra Salem and Prof. Manal Fawzy.
- The outcome of this study is comprehensive analysis of the status in OBR in terms of structure and function, and proposition of a new zonation to be in line with Lima Action Plan.
- Zonation of OBR has been modified to fulfill the functions of OBR. Such process was essential after observing the impacts of several national development plans and projects that took place in the western
coastal desert of Egypt, and consequently affecting the conservation function of OBR particularly the two cores areas.

- Detailed information about the main conservation projects in OBR and Allaqi biosphere reserves and the involvement of stakeholders and local communities was provided.

V- Attendance of MAB meetings and Regional Workshops

- Prof. Manal Fawzy, member of the National MAB committee attended and delivered a lecture titled: *Improving the capacity to manage, Training and Research* in the UNESCO Regional Workshop on “*The Effective Management of Biosphere Reserves in the Arab Region*” Alger-ALGERIA 1-3 December 2015.

- Prof. Boshra Salem, member of the National MAB committee attended and delivered a lecture titled: *MAB and World Network of Bioephere Reserves Post RIO 20 , New Strategy 2014-2025* in the Arab MAB meeting in Agadir, Moracco, May 2015.

- Prof. Manal Fawzy, member of the National MAB committee attended *First Joint Arab and African International Hydrological Programme (IHP) and the Man and Biosphere (MAB) Meeting Towards COP 22 and SDG 2030.* Tangier, Moracco. 18-20 October, 2016.

- Prof. Boshra Salem, member of the National MAB committee attended Euro MAB meeting, Sarlat-la- Caneda City, France. 4-7 April 2017.

- Prof. Manal Fawzy and Prof. Boshra Salem members of the National MAB committee attended *9th Arab MAB Network meeting & Regional Thematic Workshop” Governance, Finantional Management and Green Economy”, Algeria, 22-24 May 2017.* In this meeting Egypt has been elected to be one of Arab MAB bureau member.
Arab MAB meeting in Agadir, Morocco, May 2015

First Joint Arab and African International Hydrological Programme (IHP) and the Man and Biosphere (MAB) Meeting Towards COP 22 and SDG 2030. Tangier, Morocco. 18-20 October, 2016.