

**OIC Ministerial standing committee  
on Scientific & Technological Cooperation**



**Inter-Islamic Science and Technology Network on Oceanography**

**İSLAM ÜLKELERİ OŞİNOGRAFI BİLİM VE TEKNOLOJİ AĞI**

**Réseau Inter Islamique des Sciences et Technologie de l'Océanographie**

**INOC's Activities 2009-2014  
and  
Programs 2014-2016**

**Prepared by: A. CHOUIKHI**

**August 2014**

This report describes programs and activities accomplished by INOC during the period from September 2009 to September 2014.

## **1. Ninth Steering Committee Meeting, Izmir, 22 October 2009**

The prominent and unanimous opinion of the assembly on the financial issues was that:

- Turkey will have to regularly contribute to the running budget of INOC, an obligation that the host country had not been complying with since July 2005 and to settle its debts,
- The membership fees should have consistency and the distribution of incomes and expenditures over the member countries should be displayed into the reports.

### **ELECTION**

According to INOC bye-laws the mandate of the current executive council now comes to its conclusion. The participants unanimously thanked the members for all their efforts particularly in relation to promoting the role of the network. Thanks were addressed to the President, the Vice-presidents and the Executive Secretary.

According to INOC bye-laws the host country proposed the next president of INOC. The meeting was informed that the host country has now formally nominated again Prof. Orhan USLU as President in view of his experience and past contribution to INOC. The meeting unanimously accepted this nomination of the new President and congratulated him.

The new president in his turn according to bye-laws and protocol proposed the renewal of the mandate of the Executive Director Prof. Abdelouahab CHOUIKHI.

- The nominees for the INOC vice presidents representing Arab world, Asia and Africa were proposed, discussed, voted and designated. (ANNEX V):
  - Arab states: Prof. Dr. Adib SAAD from Tishreen University, Lattakia / Syria
  - Asia: Dr. Vahid CHEGINI from Iranian National Center for Oceanography, Tehran, I.R. Iran
  - Africa : Dr. Hamet Diaw DIADHIOU, Centre de Recherches Océanographiques de Dakar / Sénégal

### **The members of the INOC scientific committee:**

Dr H.H. KOUYOUMJIAN continues to chair the scientific committee. Dr. Kouyoumjian proposed the list below of members of this committee:

- Dr. Djamal Eddine ZOUAKH, Ecole Supérieure des Sciences de la Mer et de l'Aménagement du Littoral (ESSMAL).Alger –Algeria
- Prof. Dr. Mohammad ZAFAR, Institute of Marine Sciences and Fisheries, University of Chittagong, Bangladesh.
- Prof. Dr. Samia KAMEL MIKHAIL, National Institute of Oceanography and Fisheries, Alexandria, Egypt.
- Prof. Dr. Ahmed SAVARI, Department of marine biology, University of marine science and technology Khorramshahr- Iran.
- Dr. Birane SAMB, Centre de Recherches Océanographiques de Dakar – Sénégal.
- Dr. Mohammad Khaleel AL-ZIBDAH, Marine Science Station, Jordan-Yarmouk University.

- Dr. Assad Ahmed AL-THUKAIR, King Fahd University of Petroleum & Minerals, Dhahran 31261, Saudi Arabia.
  - Prof. Dr. Amel HAMZA-CHAFFAI, Sfax University, Tunisia.
  - Prof. Dr. Hussein AVNI BENLI, Dokuz Eylul University, IMST, Izmir- Turkey.
  - Dr. Kemal Can BIZSEL, Dokuz Eylul University, IMST, Izmir- Turkey
- 2. Training courses on Marine taxonomy, Bahçesehir University – Istanbul (September 20-23, 2010; Institute of Marine Sciences & Technology of Dokuz Eylul University, Izmir. (September 24 to 01 October 2010)**

The working group of the international workshop on “Marine & coastal Protected Areas”, (Rabat, 23-25 March 2005) has recommended the organization of training courses in taxonomy. The Steering committee of INOC during its eight sessions meeting (Rabat, 26 March 2005), analyzing the problem of the lack of taxonomist in the Islamic countries, pointed out what follows:

- Taxonomy does not number among the priorities set for research, and students are no longer drawn by this discipline;
- Authorities dealing with conservation of biodiversity call upon universities and researchers to assist them in taxonomy. The implementation of conservation programs was affected by the lack of taxonomists.
- Absence of natural history museums in the majority of these countries which can play an important role in taxonomy and in the maintenance of reference collections.

Consequently, all Islamic countries need a generational renewal of taxonomy specialists. They need to increase their number and to provide them with a higher level of specialization in order to manage their costal area and to carry out the Convention on Biological Diversity (CBD).

In order to attain this goal, the INOC steering committee had fixed some operational objectives and had decided to organize its first training courses in the field of marine taxonomy.

**Its Objective:**

- To reinforce the national capacities of the Islamic countries in marine taxonomy

It is evident that the anthropogenic activities have a deleterious impact on the diversity of marine life. Indeed, it was estimated that the current rate of species extinction is at least a thousand times superior than extinction over the paleontological record; and certain model envisage even a tenfold increase if the current trend of the destruction of the habitats is not halted and reversed in the immediate future

The alarm has been sounded and the problems were mentioned on several occasions; however, this remedial process could be hampered by the absence of adequate materials and manpower in particular, taxonomists, who are called upon to provided the necessary information in view of preserving this world heritage.

The absence or the insufficiency of exact information and documentation on natural resources and biodiversity in the Arabo-Islamic world are partially due to the absence of dedicated resources. More than at any time there is a call to rectify this state of affairs and follow-up on the guidelines of the world initiative on taxonomy within the context of the Convention of Biodiversity. Thus it becomes imperative to fill in the knowledge gaps, train more taxonomists and museum curators.

The majority of member countries of the Organization of Islamic Conference (OIC) are maritime states bordering the Atlantic coast of north-west Africa, the eastern and southern coast of the Mediterranean Sea, the Red Sea, North Arabian Sea need to dedicate more resources and train the taxonomists of the future. It is important that targeted action follows international directives and protocols to which many of these countries are signatories.

The theoretical lectures were followed by practical works in the laboratories and a field trip on board a research vessel.

- (I) The principal objective of this training was to establish a theoretical basis (French/English) for contemporary taxonomy. This was expected to raise the regional awareness of biodiversity and the role of taxonomy in general.
- (II) Answer to the engagement of Islamic countries to the CBD program on Taxonomic research.

It is proposed in this module the forward setting of:

- The degree of the engagement of the different IOC countries in the implementation from convention on biological diversity (signature, ratification, dates of signature/ratification);
- The engagement of the IOC countries in the development of the phase “National Study on the Biodiversity”;
- The engagement of the OIC countries in the installation of a “strategy and an national action plan for the conservation and the durable use of the biodiversity in these countries”;
- At which points these strategies and action plans were implemented and contributed to the safeguarding of the biodiversity to the national scales;
- Degree of engagement of these countries in the development of the optional ratios on the protected areas, the forest...
- Degree of engagement of the various countries in the development of the ratio on taxonomy;
- The installation of a Focal Point on the taxonomy and the activities undertaken by these;
- Engagement of the OIC countries in the development of the four National Reports required until now by the secretariat of convention;

Closing the training course, the scientific Committee awarded Certificate to all participants of the training courses.

The report (CD) of the training courses on Marine Taxonomy was prepared and edited by INOC on December 2010.

### **3. Second international colloquium on” BIODIVERSITY & COASTAL ECOSYSTEMS”, 28-30 November, 2010, Oran-ALGERIA.**

For commemorate the 2010 International Year of Biodiversity adopted by the General Assembly of the United Nations, the second international COLLOQUIUM ON BIODIVERSITY & COASTAL ECOSYSTEM, was organized by INOC & the University of Oran Es-Sénia, and supported financially by the Laboratory network of environmental

monitoring. It brought together many of the active researchers in different fields of oceanography. In all, the number was of 190 participants from 11 countries.

This was one of the prestigious scientific meetings on oceanography in the Southern Mediterranean.

A total of 98 talks and 83 posters were presented, and where parallel sessions were scheduled the plenary introductory session featured covering the full range of topics.

The scientific programme focused on Littoral ecology and risks, Marine stock management and sustainable development, Marine and Coastal Biomonitoring, Coastal management and policies.

Accomplishments of this colloquium include: thorough exchange of idea, focus of efforts on issues of major concern, exchange of information, data and research findings and interest in interdisciplinary investigation on oceanology.

The proceedings of the colloquium on " Biodiversity & Coastal Ecosystems", BEL2 was prepared and edited by INOC on February 2011. (Number of pages: 529)

#### **4. International Conference on "BIODIVERSITY OF THE AQUATIC ENVIRONMENT " towards a diverse and sustainable world",13-15 December, 2010, Lattakia, SYRIA.**

For commemorate also the 2010 International Year of Biodiversity adopted by the General Assembly of the United Nations, the International Conference of biodiversity in the aquatic environment" towards a diverse and sustainable world ", was organized by the University of Tishreen and the Inter Islamic Science & Technology (INOC) under the auspices of Prof. Ghayas Barakat, Minister of Higher Education.

Its objective was to bringing together scientists, practitioners and the public to discuss and advance our understanding of the issues surrounding the importance of biodiversity in the aquatic environment. The conference had addressed issues of marine biodiversity across a deliberately wide range of relevant spheres and interacting topics.

More specifically the conference aims were:

- Review our knowledge of marine biodiversity and its role in marine ecosystem functioning;
- Assess the most critical threats to marine systems and consider management strategies;
- Discuss sustainable development and socio-economic impacts on the marine sector;
- Discuss about a proposition for establish a future regional research project in the Eastern Mediterranean Sea.

All sessions had a total of 96 oral scientific presentations and the opening session with seven scientific keynotes, giving a broad overview of different aspects on the Biodiversity of the Aquatic Environment-. In parallel, there was a permanent poster sessions, with a total of 56 poster presentations.

There were 177 participants in the conference, coming from 24 different countries.

The proceedings of this conference on "BIODIVERSITY OF THE AQUATIC ENVIRONMENT towards a diverse and sustainable world", was prepared and edited by INOC. (Number of pages: 698)

## **5. Ocean Science Capacity Building in the Middle East/North Africa: Summary and Recommendations , Izmir, Turkey, 19-21 April 2011**

International Participants: George Boehlert (PICES), Claudia Delgado (Training Coordinator, UNESCO/IOC Project Office for IODE), Kurt Hanselmann (Switzerland), Venu Ittekkot (Chair, SCOR CB Committee, Germany), Sophie Seeyave (POGO), Ed Urban (SCOR), and Edy Yuwono (Indonesia, Observer)

Regional Participants: Adib Saad (Syria), Avni Benli Huseyin (Turkey), Sükrü Besiktepe (Turkey), Samia Mikhail (Egypt), Abdelouahab Chouikhi (INOC), Hratch Kouyoumjian (INOC), Temel Oguz (SCOR and Turkey), K. Can Bizsel (Turkey), Assad Al-Thukair (Saudi Arabia). Regrets: Invitees from Lebanon, Tunisia, Morocco, Algeria, Libya, and Kuwait could not attend due to other commitments.

### **Introduction**

Representatives of international organizations and regional institutions in the Middle East and North Africa met at the Institute of Marine Sciences and Technology (IMST), Dokuz Eylul University (DEU) on 19-21 April 2011 at a meeting sponsored jointly by the Scientific Committee on Oceanic Research (SCOR), Inter-Islamic Science and Technology Network on Oceanography (INOC), and IMST. The goal of the meeting was to discuss ocean sciences capacity building activities in the region and to explore the feasibility of establishing a regional graduate network for oceanography. In attendance were representatives of SCOR, INOC, the International Oceanographic Data and Information Exchange (IODE) of UNESCO's Intergovernmental Oceanographic Commission, the North Pacific Marine Sciences Organization (PICES), the Partnership for Observation of the Global Oceans (POGO), and representatives of institutions from INOC member states such as Egypt, Saudi Arabia, Syria, and Turkey.

### **General Benefits of Regional Cooperation**

A discussion of regional cooperation identified general benefits that could result, as well as more specific benefits that could result from a Regional Graduate Network for Oceanography (see below). In general, regional cooperation could result in

- standardizing of data collection in the region (common techniques, training);
- accessing and sharing of large data sets;
- planning of regional research and cruises (e.g., ECOLE) as a basis for capacity building and education;
- accessing benefits of existing bilateral agreements and commitments through memberships in regional and international organizations; and
- increasing effectiveness of fund raising and developing agreements with developed country institutions. Some donor institutions prefer multi-sponsor proposals.

### **Development of a Regional Graduate Network for Oceanography**

The SCOR concept of a Regional Graduate Network for Oceanography (RGNO) was presented and discussed to assess its feasibility in the Middle East and North Africa region, within the context of already existing higher education structures and mechanisms. Participants discussed the potential benefits that could arise from an RGNO in the region:

- developing graduate program with joint courses, taking advantage of the strengths of each institution and the unique features of different ocean environments in different countries;

- establishing shared scholarships among institutions;
- sharing high-tech equipment, analytical and modelling tools, as well as research facilities; and
- sharing of expertise (e.g., faculty/scientist exchanges).

Several of the above-mentioned opportunities are already being exploited in the region, such as exchange of students, and the conduct of workshops ,Training courses and summer schools. Furthermore, a certain amount of networking through workshops and conferences is also being achieved through INOC actions.

Participants expressed a strong interest in exploring the idea of establishing an RGNO, pending the gathering of additional information on the status of institutions, their capabilities, and complementary assets. An approach such as a SWOT (strengths-weaknesses-opportunities-threats) analysis was raised as one approach that could be used. It will be important for institutions and nations in the region to demonstrate the added value that would be provided by an RGNO. International organizations will explore the possibility of advising on the feasibility of this process.

Nevertheless, the already available facilities and the planned regional research program (e.g., ECOLE: Expedition in the Eastern Med. Sea), in conjunction with the mechanisms offered by international organizations such as SCOR, POGO, and IODE can be used to initiate training courses and establish a training Centre and thus to lay the foundation for such a regional network.

Preliminary draft project: Observing and assessing ecosystem changes in the Levantine Sea: ECOLE- e-Med, prepared by Prof. Dr. Sükrü BESIKTEPE is attached in Annex on page)

With this in mind, the following steps are recommended by meeting participants:

- INOC could designate a focal institution to coordinate and facilitate training activities, considering the diverse training requirements of the region and the diversity of topics in which training is required.
- INOC could in due course serve as an additional communication channel in the region for networking connecting with international organizations.
- INOC could communicate this report to all countries in the region, inviting participation and action on recommendations.
- International organizations (e.g., SCOR, IODE, POGO, etc.) should consider assessing institutional interests in regional graduate networks. A questionnaire can be circulated to meeting participants and focal points through INOC.
- Based on input received, international organizations should consider conducting a workshop on Graduate Network development to share the experiences of other regions (e.g., Univ. of Concepcion program).
- Interested institutions in the region could continue the dialogue initiated by this meeting towards achieving the long-term goal of establishing a Regional Graduate Network for Oceanography (RGNO). This process might be advised by SCOR, IODE, POGO, PICES etc., as appropriate. Institutions participating in the RGNO should establish a steering committee to oversee and advise on joint training activities.
- The RGNO could fully utilize the facilities available at the regional institutions, for research, training, etc.

- INOC can request the IOC project office for IODE to provide additional support for organizing specific courses addressing the training needs of the region in data and information management.
- Institutions in the region need to further develop joint regional research activities, such as the ECOLE Project.
- The RGNO steering committee should identify and further develop the proposed capacity building actions within the ECOLE Project that will benefit from international cooperation. INOC countries are invited to support the proposed capacity building activities that are part of ECOLE and other projects, in view of developing similar activities in other regions.
- Countries in the region could make use of available information on the expertise and infrastructure at institutions in the region (e.g., the UNEP Regional Seas Program has information on operational units and available facilities in regions) to identify opportunities for cooperation among institutions and nations.
- Scientists in the region could consider developing a SCOR Working Group proposal on a regional topic with global relevance (addresses fundamental scientific questions that are regionally and globally relevant and applicable), taking into account other ongoing activities.
- In 6 months' time, a preliminary assessment of progress on implementing these recommendations will be done (e.g., in October 2011 at the INOC conference in Indonesia).

The meeting provided a valuable opportunity for participants from the region to become acquainted with the activities of international organizations. It is hoped that this report will serve as a useful basis for discussions in the region.

#### **6. INOC Meeting on the progress of international research project: "ECOLE e-MED: Observing and Assessing Ecosystem Changes in the Levantine Sea", 21 April 2011**

Regional Participants: Adib Saad (Syria), Avni Benli Huseyin (Turkey), Sükrü Besiktepe (Turkey), Samia Mikhail (Egypt), Abdelouahab Chouikhi (INOC), Hratch Kouyoumjian (INOC), Temel Oguz (SCOR and Turkey), K. Can Bizsel (Turkey), Assad Al-Thukair (Saudi Arabia).

Regrets: Invitees from Lebanon, Tunisia, Morocco, Algeria, Libya, and Kuwait could not attend due to other commitments

#### **Agenda**

- Review of the background document
- Elaboration of the scientific content of the cruise
- Elaboration of project execution time frame
- Follow up

It was decided to have two consecutive research cruises preferably with a period of 12 months, one in high (summer, preferably August to October) and one in low (February to April) seasons. Overall duration of the project was foreseen as three years starting 2012

The meeting decided to ask Prof. Dr. S. Beşiktepe to act as the facilitator and the leader of the scientific core groups whose main task at this stage would be to develop the work

packages as defined above. He accepted. His immediate task will be getting in touch with the proposed scientists in order to coordinate their needs and work plans.

It was decided to find the necessary funds for convening a meeting of the scientific groups in order to discuss the proposals and agree upon a common approach and methodology.

It was decided that funds could be obtained from the Turkish Science and Technology council and that the Turkish colleagues will follow-up on that.

A draft time frame for the project extending over 2 years prepared by INOC was discussed in detail. All the proposed changes and modifications were discussed and will be included in the new work execution plan by Dr. H. Kouyoumjian. It was decided to have this reviewed and circulated by May 10, 2011, for execute the research project: "ECOLE e-MED during the period 2012-2015

#### **7. International conference on "the issue of Marine Natural Products and their Bioactive Metabolites "25-27 October 2011, Bogor- Indonesia.**

This conference was organized by the Inter Islamic Sciences & Technology Network with the collaboration of the Faculty of Fisheries and Marine Sciences, Bogor Agricultural University, Bogor-INDONESIA. The meeting was held from 25 to 27 October 2011, the first day at IPB CENTRE DE CONVENTION INTERNATIONALE and the other days at Bogor University.

Its objective is to sensitize more scientists from the Islamic world, catalyze research along these lines and provide researchers opportunities to share their experiences and information on the current research activities on the major topics in view of the economic importance for all the Islamic countries for their cosmetics, pharmaceuticals, dietetics and alimentary sectors.

A total of 84 talks and 72 posters were selected, the scientific programme was focused on:

- Biological and biomedical properties, Biotechnology of Bioactive Marine Natural Products, Bioactive marine toxins;
- Marine Biodiversity;
- Ecology, Biological investigations;
- Marine Aquaculture & Fisheries;
- Chemical investigations.

The following recommendations were made at the closing session of the symposium:

- The Symposium recommends networking activities amongst INOC member country marine centres and scientists and asks INOC Secretariat to promote and facilitate such activist in line with the needs of the member countries. In this respect the meeting noted the proposal of Pakistani and Saudi Arabian attending scientists to network on specific themes and take advantage of the fellowships offered for graduate studies respectively;
- Many participants having noted the improving scientific quality of the oral and poster presentations recommend a continuous focus on scientific content of INOC activities;
- Participants ask INOC to investigate the possibility of organising a training course (s) on the methodologies of writing high-level scientific communications in the English language;

- As regards the 2012 and 2013 INOC-organised annual meetings, INOC Secretariat reported that discussions have taken place with Lebanon and Malaysia respectively. The meeting recommends that INOC follow-up and finalize the venues dates and the themes for the forthcoming meetings in Lebanon and Malaysia respectively;
- The Committee composed of session presidents and rapporteurs recommended that the 2011 certificates for best presentations be awarded to the following:

Ms. Kustiariyah Tarman - Indonesia, and Dr. Sujjat Al Azad Sujjat –Bangladesh/ Malaysia for the two best oral presentations

Mrs. Nadia Hocini -Algeria and Ms. Fateme Aghajanpour – Iran, for the two best poster presentations

The meeting approved the choices and certificates were presented to the winners. At the end of the closing session, the participants thanked the host institution, its personnel, the students and the volunteers for all their assistance and support to make this a successful meeting. Special thanks went to the Dean of the Faculty of Fisheries and Marine Sciences Prof. Indra Jaya for his support and contribution.

The meeting kindly asked him to convey special thanks and appreciation to the Academic and Civic dignitaries and the Sponsors who honoured us during the formal sessions.

Finally, the meeting expressed its gratitude to IDB and COMSTECH for their unfailing support and financial contribution to the activities of INOC.

INOC has prepared, printed and edited the abstracts book and the conference proceedings of 358 pages.

#### **8. International conference on "Land-Sea Interactions in the Coastal Zone" LANDSI- 2012 "Jounieh, LEBANON, November 06-08, 2012".**

This conference was organized By INOC with the collaboration of the Marine Research centre-CNRS of LEBANON. The meeting will be a venue for scientific exchange across broad marine science disciplines, including physical, biological, chemical and geological oceanography, and multidisciplinary topics.

INOC has received the registration of 250 scientists from the Islamic world and the scientific committee has selected 170 communications (100 Oral presentations and 70 Posters).The countries which will participate were: Algeria, Bangladesh, Egypt, India, Indonesia, Iran, Jordan, Lebanon, Malaysia, Morocco, Mauritania, Oman, Pakistan, Saudi Arabia, Syria, Tunisia, Turkey.

The discussions and critical comments taken as constructive inputs during this conference have permit to develop the following recommendations:

- An integrated sustainable coastal land use and water management system should be established,
- Integrated model approaches should deal with all competitive requirements of future coastal land-use and climate change,
- Prospect and establish more Marine Protected Areas, which are effective tools to protect the coastal zones containing the most valuable marine habitats, species and ecosystems, possible in line with their nearest land, particularly through the creation of terrestrial parks in continuity with them.
- GIS-based tool shows the consequences of land use change on the economical, social and ecological levels, which can contribute to the sustainable and diverse coastal land use system,

- Taking consideration of economic, social aspects and climate change issues to keep whole picture related with marine water and coastal land use is important, by integrating three critical elements- ecological, economical and social aspects into a “Coastal zone Use Planning System” can achieve sustainable improvements of terrestrial and marine ecosystem conservation,
- Scientists have to be openers in an inter-disciplinary manner.

The committee formed by the session Presidents and Rapporteurs met with the INOC Scientific Committee President, Dr. H. Kouyoumjian and recommended that the Certificates of Excellence be given to the following participants:

Samina Kidwai from Pakistan for her oral presentation: “Biodiversity as part of the ICZM- A case study of Karachi, Pakistan.”

Carine Abi-Ghanem from Lebanon for her oral presentation: “Pb and Cd contamination and mobility in marine sediments of two ports in Lebanon.”

Yekta Fatemeh Amini from Iran for her oral presentation: “Distribution of rocky intertidal Molluscs in Qeshm Island, the Persian Gulf.”

Bedri Alpar from Turkey for his poster presentation: “Stratigraphy and dynamics of the Ahirkapi Sand Bar, Istanbul, Turkey.”

Exceptionally this year a 5th certificate was given to:

Waad Sabour from Syria for her long-term contribution to INOC and for her poster:

“Reproduction and spawning period for chub mackerel *Scomber japonicus* off Syrian marine waters”.

The Committee made observations and the following general recommendations:

- The INOC scientists were encouraged to develop joint activities on the following themes:
  - Better understanding of coastal processes and modelling;
  - Bio-active substances and geo resources.
- As regards future conferences, it was recommended to give priority to countries that have not hosted INOC conferences provided of course they submit formal requests to INOC Secretariat defining the theme of the conference and their contribution as host country.
- The meeting was informed of interests from a number of countries to hold the forthcoming meetings: Egypt, Pakistan, Jordan and Morocco. INOC Secretariat will follow up on these requests in due course.

As regards the 2013 conference titled “Oceanography and Sustainable Marine Production: A Challenge of Managing Marine Resources in the Changing Climate”. It was decided to organize it with the collaboration of the Institute of Oceanography and Maritime Studies (INOCEM) of the International Islamic University Malaysia and the National Oceanography Directorate (NOD). It will hold from 28 to 30 October 2013 in Kuantan- Malaysia. Discussions are already in progress and the member countries will be informed of the conference particulars in due course.

- As regards topics for future conferences, the following were suggested:
  - Habitat classification,

- Use of new technologies such as GIS,
  - Global warming and climate change,
  - Eco-sustainable aquaculture,
  - Energy fluxes,
  - Renewable energy,
  - Marine archaeology,
  - Deep ocean studies.
- It was decided to form specialized technical groups around subjects of common interest. It was mentioned that unless a country takes the lead and provides seed funds, such activities will fail. In this context, Iran suggested to organize a team on new technologies under the auspices of INOC.
  - In view of the success of the 2010 training on cladistic classification, the participants urged INOC to study the possibility of organizing more training activities around topics of common interest. Molecular biology analytical methodologies could be one such theme.
  - The participants were asked to be more proactive in their dealings with the INOC secretariat and contribute to the elaboration of its Internet site ([www.inoctr.org](http://www.inoctr.org)).

The above recommendations were seconded and unanimously approved.

INOC has prepared and printed the abstract book of the conference (221 pages) and also edited the conference book (555 pages).

#### **9. INCAM FINAL REGIONAL CONFERENCE, Izmir- Turkey, 16-17 May 2013**

Endorsing ICZM principles & environmental objectives in the Mediterranean: lessons learned from the FP7 INCAM project

#### **10. International Conference (ICOSMaP – 2013) on "Oceanography and Sustainable Marine Production: A Challenge of Managing Marine Resources under Climate Change ", Kuantan- Malaysia, 28-31 October 2013**

The conference had taken place at Hotel "Sri Manja Boutique" in the city of Kuantan-Malaysia. This Conference was jointly organized by the Inter Islamic Sciences & Technology Network on Oceanography (INOC) and the faculty of Sciences-Institute of Oceanography & Maritime Studies - International Islamic University (IIUM), Malaysia.

It was the second time that the INOC scientific meetings were scheduled in Malaysia. The opening session was followed by the signing ceremony of the Memorandum of understanding between IIUM and Kagoshima University of Japan.

Prof. Ojvind Moestrup (Denmark), Prof. Reiji Masuda (Japan), Prof A. Abu Samah (Malaysia) and Prof. A. Chouikhi (INOC) have presented key notes.

One of the main INOC objectives was to stimulate young scientists to engage in research in the different fields of oceanography and simultaneously promote interactions with colleagues around the Islamic world. We were delighted with the great support of the scientific community which had been seen by the participation of many distinguished scientists working in diverse fields such as adaptation to and mitigation of the effects of climate change on sustainable marine resources , not only from Islamic world but also from others countries.

ICOSMaP – 2013 brought together almost 140 scientists and massive participation of PhD's students from 21 countries. More than 230 abstracts were submitted, out of which 97 were selected for oral and 74 posters presentations. Interesting debates and discussions on the different topics as well as an exchange of ideas and perspectives were held during the various sessions of the conference

These abstracts were organized in a Pdf in the format of the published Book of Abstracts, were made available at [www.inoctr.org](http://www.inoctr.org) before the conference and distributed during the registration to the conference.

Besides the traditional topics of the Marine Resources under Climate Change, others topics mentioned below were included in this Conference. Four parallel sessions were scheduled and the four plenary introductory themes featured reviews covering the full range of ICOSMaP topics:

- Oceanography, Coastal Processes & Geomorphology (Effects of climate change on Oceanography; Coastal hydrodynamics: Coastal erosion and sediment transport; GIS and Remote sensing for marine application; Ocean acidification & CO2 sequestration; Integrated Coastal Zone Management).
- Marine Ecology & Biodiversity (Marine environment & pollution; Marine plankton including Harmful algal bloom; Threatened & Invasive species; Conservation of marine resources; Impacts of climate change on marine ecosystem & resources; Adaptation and minimization strategies of climate change effects; Sustainable development & environmental integration; Prevention of marine flooding and floods & hydraulic risk management; Artificial reef & marine ecosystem management)
- Biotechnology & Marine Natural Products (Issues & challenges in breeding & hybridization in aquaculture; Use of biotechnology for adaptation & minimization of climate change effects on marine resources; Genetic effects of aquaculture escapees; Marine Renewable Energy; Marine Pharmaceuticals)
- Aquaculture & Fisheries (Sustainable marine production, Effects of climate change on aquaculture & fisheries: assessment & minimization; Seafood security in the hanging climate; Environment-friendly aquaculture; Disease & biosecurity in aquaculture; Stock assessment & marine ranching , Aquaculture feed & nutrition)

INOC has prepared and edited book and CD of the conference (572 pages).

#### **11. Fourth International Congress of the Populations & Animal Communities "Dynamics & Biodiversity of the terrestrial & aquatic Ecosystems ", CIPCA4, 19 - 21 November 2013, TAGHIT (Béchar)-ALGERIA.**

This congress held at the cultural centre of TAGHIT town (Province of Béchar) ALGERIA. It was organized by the laboratory of dynamics and biodiversity (LaDyBio), Faculty of Biological Sciences (FSB), University of sciences and technology Houari Boumediene-Algiers (USTHB) under the patronage of the scientific research direction from the Ministry of higher education and scientific research.. INOC has contributed to help in the preparation, the printing and the edition of the proceedings congress.

This scientific event has reviewed all links in marine, freshwater and terrestrial food chains (microflora, phytoplankton, zooplankton, macroinvertebrates, fish, amphibians and birds). It has been an opportunity to bring together scientists, professionals, stakeholders, and users to discuss, share their experiences and advancing their understanding on the challenges and perspectives for an effective and rational management of aquatic and terrestrial resources. It allowed to the participants to update on the latest developments in

the field of water management and resources preservation by scientific keynotes, lectures and round tables of great interest on the key challenges of water.

CIPCA4 - 2013 brought together over 180 scientists and participants from different universities of Algeria and foreigners from 9 countries with a massive participation of students preparing their doctorates. Over 500 abstracts were submitted to the Scientific Committee of the Congress, whose only 167 have been selected including 24 keynotes lectures, 66 oral presentations and 77 posters. Interesting discussions on the different themes and an exchange of ideas and perspectives were held during the various sessions of the Congress.

Four parallel sessions have been scheduled covering 3 themes, namely:

- Biodiversity of terrestrial, marine and continental environments
- Ichthyology and aquaculture,
- Climate change and water resources.

One important recommendation was given by the scientists during this meeting:

To give the extreme importance to the Systematic of living resources and to solve the problem of the lack of researchers in this discipline, the Committee encourages all initiatives relating to training in taxonomy and the recruitment of researchers in Systematic.

INOC has prepared and edited book and CD of the congress (491 pages).

## **12. Third INTERNATIONAL COLLOQUIUM on "Biodiversity & Coastal Ecosystem" BEL-03, Oran-Algeria, 26-28 November 2013**

The third international colloquium on biodiversity & coastal ecosystem, was organized by INOC & the University of Oran Es-Sénia, and supported financially by the Laboratory network of environmental monitoring. It brought together many of the active researchers in different fields of oceanography. In all, the number was of 136 participants.

A total of 81 talks and 51 posters were presented, and where parallel sessions were scheduled the plenary introductory session featured covering the full range of topics.

The main results of the different exposed sessions converge towards the same point: the impacts of human activities on the coastal and marine biodiversity and disrupt of their equilibrium. Some works highlight levels of chemical, microbiological and parasitical contaminants of physical and biological compartments.

On the basis of all the information identified and considered as constructive contributions from this symposium, the participants recommend:

- The establishment of sewage water stations at the level of each coastal commune and polluting industrial units;
- Reactivation and boosting the network RASMER,
- Awareness-raising and the involvement of all stakeholders of the maritime area for integrated coastal zone management and sustainable development,

This program will focus on the following priorities:

- The implementation and enforcement of the regulations for the impact studies of all projects that might disturb negatively directly or indirectly the marine environment

- Sanitation and monitoring of releases related to thermal power and water desalination units and grant a particular interest in all activities related to hydrocarbons (shipping, ballast station, loading of the hydrocarbons...)

The proceedings of the third colloquium on "Biodiversity & Coastal Ecosystems", BEL3 was prepared and edited by INOC on February 2014. (Number of pages: 625).

**13. International Congress on "Estuaries & Coastal Protected Areas" ECPA 2014, 04-06 November 2014, Izmir – TURKEY.( in preparation)**

The ECPA 2014 Congress organized by INOC will bring together experts, managers and users of the coastal areas in addition to other stakeholders from both the private and public sectors interested in order to share experiences in the management of the coastal zone; This meeting will also provide us a valuable opportunity to assess and monitor what has been accomplished since the first INOC Meknes workshop of 2005.

Objectives of the congress

- Promote exchange of information on recent developments in the protection, restoration and management of coastal areas including estuaries,
- Stimulate interaction between coastal oceanographer's, engineers, researchers, managers, and representatives of civil society to share knowledge, experience, and expertise.
- emphasize the urgency for action, to revitalize scientific activities in coastal areas, to define strategies for the management of coastal regions, and
- Provide a forum for junior scientists and engineers where they feel comfortable in presenting and testing their ideas.

The sub-themes below will form the main topics during the sessions and round tables discussions:

1. Coastal ecosystems: understanding the physical and biological complexity of coastal environments.
  - Biodiversity of marine and estuaries ecosystems, species distribution
  - Coastal geomorphology, coast, dynamic, transit of sediments,
  - Instability of coastal, vulnerability, adaptation and coastal resilience,
  - Monitoring of ecosystems
2. Environmental impacts: coastal hazards
  - Physical and chemical changes of estuaries and coastal habitats, including the acidification of the oceans, climate change and related impacts: Storm, flooding and sea-level rise,
  - Water quality, pollution threats,
  - Invasive species and / or harmful species and their spread.
3. The impacts associated with human activities and responses to coastal change
  - Change of estuarine habitats, wetlands and oceans.
  - Integrated management and marine protected areas.

- Management of biological resources (fisheries, aquaculture) in relation to climate change,
- Protection and conservation of biodiversity,
- Restoration of wetlands, coral, mangroves, beaches and coastal areas of adjacent ecosystems and ecotones...
- Human and social aspects impact related to demography in the coastal area and the solutions
- Use and development of: coastal Infrastructure, tourism, navigation, exploitation oil and gas, wind energy, etc.
- Exploration and scientific research.

INOC has received exactly 378 registrations with abstracts. The scientific committee has selected 275 presentations (98 oral +177 posters)

## Inter-Islamic Science and Technology Network on Oceanography

### INOC's FINANCIAL REPORT 2009-2014

#### Finance:

Implementation of the program for 2010-2014 was based on the assumption that the host country would contribute the approved sum of \$ US 50. 000/ year for running the network and very little member states would contribute of a sum for its core programs during every biennium. Unfortunately, only Iran paid regularly its membership fee. The Kingdom of Saudi Arabia has stopped to pay its membership subscription since 2011, the Pakistan since 2012. The other countries did not answer.

The executive secretary recalled regularly the member states and sent them the proforma invoices for pay their contributions to INOC trust fund.

Besides this, the different conferences and seminars organized by INOC were sponsored by the Islamic Development Bank. Since 2012, IDB has decided to support only the training courses and has cancelled to support others activities.

INOC always lived in a precarious financial position for run its prepared research projects. In spite the limitation of our actions at least for survive and granting of small wages to the personnel of support, INOC has organized mainly the scientific meetings and training courses in several countries.

**Table 1: Financial position of INOC from September 2009 to September 2014**

INOC BUDGET	INCOME \$US	EXPENSE \$US	Balance \$US
<b>2009</b>		<b>*1,4456</b>	<b>INOC General Assembly</b>
Saudi Arabia membership 5000 \$	5000 \$		<b>Deficit (5370 TL)</b>
Pakistan membership	4990 \$		
Iran membership	4985 \$		
IDB Printing of conference proceedings	3000 \$		
IDB	20000 \$		
<b>TOTAL 2009</b>	<b>37 975</b>	<b>41 690</b>	<b>-3 715</b>

<b>01 January to 31 December 2010</b>			<ul style="list-style-type: none"> <li>- Training courses Istanbul-Izmir</li> <li>- Conference Lattakia -Syria</li> </ul>
IDB	4 880	3 715	
Ministry of foreign affairs	50 000		
IDB	2965		
Iran membership	4970		
Pakistan membership	4988		
IDB	28 000		
INOC expenditures		94 683	(145 367 TL)
<b>TOTAL 2010</b>	<b>95 803</b>	<b>98 398</b>	<b>-2 595</b>
<b>01 January to 31 December 2011</b>			<ul style="list-style-type: none"> <li>- SCOR meeting</li> <li>- Ecole-Med meetings - Izmir</li> <li>- Symposium Bogor- Indonesia</li> </ul>
<b>From INOC budget 2010</b>		<b>2 595</b>	
NIO Pakistan membership	4985		
Iran membership	4955		
IDB	24 500		
Ministry of foreign affairs	50 000		
Registration	4169		
INOC expenditures	87 700		(138 916TL)
<b>Total 2011</b>	<b>88 609</b>	<b>90 295</b>	<b>-1 686</b>
<b>01 January to 31 December 2012</b>			<b>Conference Jounieh-Lebanon</b>
<b>From INOC budget 2011</b>		<b>1 686</b>	
IDB	14 000		
IRAN	5000		
Pakistan	4955		
Turkish foreign ministry	50000		
LOICZ Germany	1910,5		
INOC expenditures		73 836	(110 805 TL)
<b>Total 2012</b>	<b>75 865</b>	<b>75 522</b>	<b>+ 343</b>
<b>01 January to 31 December 2013</b>			<ul style="list-style-type: none"> <li>- Conference Malaysia</li> <li>- CIPCA, Taghit</li> <li>- BEL3,Oran-Algeria</li> </ul>
<b>From INOC budget 2012</b>	<b>+ 343</b>		
IDB	1 772		
Turkish foreign ministry	50 000		96 715 TL
Iran	5000		

Lebanon	2 457		
INOC expenditures		56 841	(103 450 TL)
<b>Total 2013</b>	<b>59 572</b>	<b>56 841</b>	<b>+ 2731</b>
<b>01 January to 01 August 2014</b>			<ul style="list-style-type: none"> <li>- Congress ECPA, Izmir- Turkey</li> <li>- TCMM Taxonomy, Mostaganem- Algeria</li> </ul>
<b>From INOC budget 2013</b>	<b>+ 2 731</b>		
Lebanon	2 457		
Turkish foreign ministry	50000		
IDB			
INOC expenditures		40800	
<b>Total to August 2014</b>	<b>55 188</b>	<b>40 800</b>	

## **Inter-Islamic Science and Technology Network on Oceanography**

### **INOC's Programs**

**2014-2016**

The INOC program of action is prepared on a biennium basis. The objectives include holding of seminar and workshop, exchange of information, training courses and research support.

#### **1. Programme for INOC for 2014- 2016**

- Research Projects and others facilities:

The activities of point 1 and 2 below require national inputs (membership fees payment) and contribution from IDB or / and COMSTECH or /and some international agencies are:

- Project on Vermetid terraces in South Mediterranean – 2nd phase,
- Monitoring of the marine ecosystem impacted by the desalination plants: toxicity of brines on the main organisms of the trophodynamic marine web.
- Develop a database of experts in evaluation of protected area management effectiveness.
- The creation of collection of reference and a database of regional taxonomy,
- The installation of regional systematists groups for ensure the education and increase the level in the research activities.
- A Research project: phenomenon of Lessepsian migration

#### **2. Ocean services**

- Initiate establishment of Inter Islamic Data Centre on Oceanography.

Ocean Services, level II and III will be started after the compilation of all data and will permit the creation of the Inter-Islamic Oceanographic data Center in INOC. From this data base the required information could be made available to the OIC bodies, funding organizations and the country.

- Coordinate regional research project selected by the steering committee.
- Development of translation facilities (English-French and Arabic).
- Creation of an annual scientific INOC journal where the best scientific articles will be chosen analyzed by a jury and published. The jury will have to be remunerated by INOC for this work.
- Applications of the INOC meeting recommendations.

#### **3. Workshops, Symposium, Conference 2014-2016.**

International Meetings in IRAN - 2015 and in ALGERIA 2016, Egypt, Tunisia.

#### 4. INOC RUNNING BUDGET 2014- 2016

<b>2.1 /INOC running Budget</b>	<b>Expenditure in \$ US</b>
A/ Personnel	92 000
B/ Meetings and Experts	
• Experts Valuation	6 000
• Meetings organized for project	8 000
C/ Travels and perdiem for meetings and their preparations	
• National	3 000
• International	14 000
D/ Purchasing material and divers	
• Micro, CD, paper & office material	3 000
E / Printing Expenses	5 000
F / Communication Expenses (TEL, Fax, PTT)	4 000
G/ CNDO	5 000
<b>TOTAL</b>	<b>140 000</b>

**2.2 Budget for Scientific activities** expected and financed by the contribution of Member States, International Organization, OIC, COMSTECH and IDB. They will be destined to the following actions:

<b>Activity</b>	<b>\$ US</b>
Enhance of the Network. CNDO: a database of experts in evaluation of protected area management.....	5 000
Vermetid Terraces project (2 nd phase).....	15 000
Desalination monitoring program .....	15 000
Meeting of the systematians in the Mediterranean .....	10 000
Research project : phenomenon of Lessepsian migration .....	25 000
<b>Total .....</b>	<b>70 000</b>

\*Finance is one of the most important factors to ensure the smooth running of the programs planed by INOC. The secretariat will continue to organize programs such as workshops and conferences, which not only benefit the participants but also can enhance the cooperation between the Islamic countries. It is also hoped that we will continue to receive financial contribution from member countries.