Session 6: Recent KAUST Advances in Coral Reef Ecology

Co-Chairmen: Dr. Michael Berumen & Dr. Yassir Abu Alnaja

13:10-13:30 Overview of the coral reef ecology laboratory at KAUST, Prof. Michael Berumen, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST).

13:30-13:50 Functional connectivity of coral reef fishes in a Red Sea tropical seascape, Dr. Kelton McMahon, Joint Postdoctoral Researcher, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST) and Woods Hole Oceanographic Institution (WHOI).

13:50-14:10 Movement ecology of Red Sea reef fishes, Dr. Elizabeth Tyler, Postdoctoral Researcher, and Mr. Fernando Cagua, PhD Student, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST).

14:10-14:30 Phenotypic and genotypic acclimatization of fungid coral species to different habitats in the central Red Sea, Dr. Cornelia Roder, Postdoctoral Researcher, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST).

14:30-14:50 Coral reproduction in the Red Sea, Ms. Jessica Bouwmeester, PhD student, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST).

14:50-15:10 Chasing whale sharks 24/7 in the Red Sea, Mr. Pedro De La Torre, PhD Student, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST).

15:10-15:30 Break
Day 1: 08 January 2012

09:00-All Day | Registration: (Jeddah Hilton).

20:00-21:35 | Opening Ceremony (Venue: Hyatt Park Hotel)

20:00-20:05 | Welcome Address:

20:05-20:15 | The Role of King Abdulaziz University in research & education in marine science
Prof. Osama Tayeb, President, King Abdulaziz University.

20:15-20:25 | The Role of KAUST in Red Sea Marine Research,
Prof. Stefan Catsicas, Provost, King Abdullah University of Science and Technology (KAUST).

20:25-20:40 | The Khaled Bin Sultan Living Oceans Foundation: Mission and a decade of accomplishments,
CAPT Philip G. Renaud, Executive Director, Khaled Bin Sultan Living Oceans Foundation.

20:40-21:00 | Keynote Speech – A Planet in Peril,
Prof. Mohamed Faisal, Lead Scientist, Khaled Bin Sultan Living Oceans Foundation and Professor of Aquatic Animal Medicine, College of Veterinary Medicine, Michigan State University.

21:00-21:20 | The Role of Saudi Citizen Initiatives in Preserving the Marine Environment,
HRH Prince Khaled Bin Sultan Bin Abdulaziz.

Inauguration of Khaled Bin Sultan Chair of Marine Science.

21:35-22:35 | Dinner (Hyatt Park Hotel) all participants are invited.
## Day 2: 09 January 2012

### Session 1: Status of Saudi Arabian Red Sea Coral Reefs

**Co-chairman:** Prof. Mohamed Faisal & Prof. Abdulaziz Abuzinada

#### 09:00-09:20

**Opening Address:** Red Sea coral reefs: The unusual biodiversity and unique environmental setting of Red Sea coral reefs, 
*Dr. Shawn McLaughlin, NOAA, National Ocean Service & Andrew Bruckner, Khaled Bin Sultan Living Oceans Foundation.*

#### 09:20-09:40

The emergence and impacts of coral diseases, bleaching events, and predator outbreaks on Saudi Arabian Red Sea coral reefs,  
*Dr. Andrew Bruckner, Chief Scientist, Khaled Bin Sultan Living Oceans Foundation.*

#### 09:40-10:00

Status of the Saudi Arabian Red Sea coral reef fisheries and challenges for sustainable use,  
*Mr. Hussain H. Alnazry, Ministry of Agriculture, Marine Fisheries Department & Andrew Bruckner, Khaled Bin Sultan Living Oceans Foundation.*

#### 10:00-10:20

Health assessment of Red Sea coral reefs ant the role of science in coral reef management,  
*Dr. Fareed Krupp & Mr. Khaled Al-Shaikh, Al-Jubail Marine Sanctuary, Saudi Wildlife Commission (SWC), Saudi Arabia.*

#### 10:20-10:40

Status and ecology of Sirena, Cetaceans and marine turtles in the Farasan Bank, Red Sea, Saudi Arabia,  
*Dr. Ahmed Mohamed Al Mansi, Saudi Wildlife Commission (SWC), Saudi Arabia.*

#### 10:40-11:00

Coffee Break
Session 2: Living Oceans Foundation Red Sea Habitat Mapping Program: 2006-2009

Co-chairman: Capt. Philip Renaud & Dr. John McManus

1:05-11:25 (Opening Address: An overview of Khaled Bin Sultan Living Oceans Foundation Red Sea research activities, Capt Philip Renaud, Executive Director, Khaled Bin Sultan Living Oceans Foundation.

1:25-11:45 Innovative use of satellite imagery and field sensors to classify marine habitats of the Saudi Arabian Red Sea coast, Sam Purkis, National Coral Reef Institute (NCRI), Nova South-east University, Florida, USA.

1:45-12:05 Use of multispectral imagery to drive relationships between reef structure/growth and environmental dynamics, substrate constrains and other controlling factors and processes, Mr. Gwilym Rowlands, National Coral Reef Institute (NCRI), Nova South-eastern University, Florida, USA.

12:05-12:25 Seafloor mapping: moving from an image to a map, Jeremy Kerr, Living Oceans Foundation Fellow, National Coral Reef Institute, Florida, USA.

12:25-12:45 Examining potential management and conservation applications of the Living Ocean Foundation’s Geographic Information System (GIS) and habitat maps of the Red Sea coast of Saudi Arabia, Dr John McManus, Rosenstiel School of Marine and Atmospheric Science, University of Miami, USA.

12:45-13:00 Prayer & lunch
### Session 3: Living Oceans Foundation SCUBA Assessments of Corals, Fishes and Indicators of Coral Reef Resilience

**Co-chairman:** Dr. Andrew Bruckner, Mr. Khaled Al Shaikh

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Topic</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00-14:20</td>
<td><strong>Opening remarks:</strong> Overview of SCUBA survey approaches used in the Saudi Arabian Red Sea: what we did and why?</td>
<td>Dr. Andrew Bruckner, Chief Scientist, Khaled Bin Sultan Living Oceans Foundation &amp; Mr. Khaled Al Shaikh, SWC, Saudi Arabia.</td>
</tr>
<tr>
<td>14:20-14:40</td>
<td>Quantifying population dynamics of stony corals in the Red Sea</td>
<td>Dr. Alasdair Harris, Blue Ventures, United Kingdom.</td>
</tr>
<tr>
<td>15:00-15:20</td>
<td>Use of spatial distribution and size structure of reef building corals in the Saudi Arabian Red Sea to forecast future population trends</td>
<td>Dr. Bernhard Riegl, National Coral Reef Institute, USA.</td>
</tr>
<tr>
<td>15:20-15:40</td>
<td>Applying resilience to identify management options and enhance conservation</td>
<td>Dr. Andrew Bruckner, Chief Scientist, Khaled Bin Sultan Living Oceans Foundation.</td>
</tr>
<tr>
<td>15:40-15:55</td>
<td><strong>Coffee break</strong></td>
<td></td>
</tr>
<tr>
<td>17:00-18:00</td>
<td><strong>Tour at KAUST</strong></td>
<td></td>
</tr>
</tbody>
</table>
Day 3: 10 January 2012

Session 4: PERSGA Region Papers

Co-chairman: Dr. Ali Al-Aidaroos & Mr. Talal Abushusha

09:00-09:20 Overview of regional Red Sea protection objectives, Prof. Ziad Hamzah Abu-Ghararah, PERSGA Secretary General.

09:20-09:40 Status of the Egyptian marine resources of the Red Sea and challenges for sustainable use, Dr. Mahmoud Hassan Hanafy, Suez Canal University, Faculty of Science, Marine Science Dept. Ismailia, Egypt.

09:40-10:00 Coral reef fisheries in the Red Sea, Dr. Ashraf Ibrahim, Suez Canal University, Egypt.

10:00-10:20 The Aqaba marine Protected Area, Integration of marine science and resource management in the Gulf of Aqaba, Red Sea, Dr. Mohammad Al-Zibdah, Associate Research Professor, Marine Science Station, Jordan.

10:20-10:35 Coffee Break

10:35-10:55 National Red Sea marine conservation initiatives in Sudan with particular emphasis on coral reefs, Dr. Dirar H. Nasr, Red Sea University, Port Sudan, Sudan.

10:55-11:15 Impacts to Red Sea coral reefs from coastal development, pollution, shipping, tourism, and other human stressors, Dr. Abdul-Mohsen A. Al-Sufiany, Faculty of Marine Sciences, King Abdulaziz University, Jeddah.

11:15-11:35 Protecting the marine environment in the Kingdom of Saudi Arabia, Mr. Talal Abushusha, Fisheries Research Center, Ministry of Agriculture, Saudi Arabia.

11:35-11:50 Coffee Break

Session 5: KAUST Contribution to the Symposium Workshop on the impact of Climate Changes on Marine Ecosystems

Co-chairman: Prof. Xabier Irigoyen & Dr. Abdulaziz Al-Suwailem

11:50-12:10 Climate to biology in the oceans, Prof. Xabier Irigoyen, Director of the Red Sea Research Center, King Abdullah University of Science and Technology (KAUST).

12:10-12:30 Global control of regional climate in the Middle East, Prof. Georgiy Stenchikov, Chair, Earth Sciences and Engineering Program, Division of Physical Sciences and Engineering, King Abdullah University of Science and Technology (KAUST).

12:30-13:10 Prayer & lunch
**Session 6: Recent KAUST Advances in Coral Reef Ecology**

**Co-Chairmen:** Dr. Michael Berumen & Dr. Yassir Abu Alnaja

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 13:10-13:30 | Overview of the coral reef ecology laboratory at KAUST,  
Dr. Michael Berumen, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST). |
| 13:30-13:50 | Functional connectivity of coral reef fishes in a Red Sea tropical seascape,  
Dr. Kelton Mcmahon, Joint Postdoctoral Researcher, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST) and Woods Hole Oceanographic Institution (WHOI). |
| 13:50-14:10 | Movement ecology of Red Sea reef fishes,  
Dr. Elizabeth Tyler, Postdoctoral Researcher, and Mr. Fernando Cagua, PhD Student, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST). |
| 14:10-14:30 | Phenotypic and genotypic acclimatization of fungid coral species to different habitats in the central Red Sea,  
Dr. Cornelia Roder, Postdoctoral Researcher, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST). |
| 14:30-14:50 | Coral reproduction in the Red Sea,  
Ms. Jessica Bouwmeester, PhD student, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST). |
| 14:50-15:10 | Chasing whale sharks 24/7 in the Red Sea,  
Mr. Pedro De La Torre, PhD Student, Red Sea Research Center, King Abdullah University of Science and Technology (KAUST). |
| 15:10-15:30 | Break |
Session 7: Panel Discussion: Examining potential management and conservation applications of the Living Oceans Foundations Red Sea research program

Co-Chairmen: Dr. John McManus & Mr. Omar Al-Khushaim

15:30-15:50
Chairman’s Opening Remarks:
Application of the Khaled Bin Sultan Living Ocean Foundation coral reef research to support coral reef conservation in Saudi Arabia
Dr. John McManus, Rosenstiel School of Marine and Atmospheric Science, University of Miami, USA

15:50-16:30
Panellist remarks: Gaps and information needs to enhance conservation,
Capt Philip Renaud, Bernhard Riegl, Brian Beck, PME, PERSGA, MOA, SWC, KAU & KAUST representatives.

16:30-17:10
Panellist remarks: Future collaboration opportunities of KBSLOF,
Dr. Ziad AbuGhararah (PERSGA), Dr. Sameer Ghazi (PME), Mr. Omar Khushaim (SWC), Mr. Talal Abushusha (MOA).

17:10-17:30 Break

17:30-18:00
Symposium conclusions
Symposium conclusions and recommendations,
Capt Philip Renaud

18:00-18:20 Closing remarks
Prof. Abdulaziz Abuzinada.