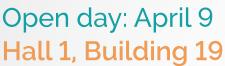


## Research Workshop:

# A NEW MONITORING ERA USING ENVIRONMENTAL DNA

April 8 - 11, 2019





# Agenda

#### **Organizing committe members:**

Dr. Susana Carvalho
Dr. Eva Aylagas Martinez

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Industrial and urban development is expected to rapidly increase along the Saudi Arabian Red Sea coastline. To ensure the protection of the marine environment it is vital to incorporate monitoring tools that enable a fast evaluation of community changes. DNA from a variety of sources (e.g., cells, mucus, gametes) belonging to a broad range of organisms can constitute environmental samples currently termed as environmental DNA (eDNA). eDNA can be rapidly screened for changes in biodiversity and community composition occurring as a response to alterations in environmental conditions. This approach can significantly decrease the time and costs associated with sample processing, enabling timely communication with stakeholders and governments to support adaptive environmental management, i.e. to apply corrective measures to minimize detrimental impacts on the marine environment.

Our workshop will address the recent advances in the application of eDNA-based marine monitoring under different anthropogenic stressors. This event aims to produce a set of recommendations for timely marine monitoring based on the frameworks applied in other parts of the world. Further, we aim to discuss what are the current drawbacks for a general application of eDNA-based monitoring programs and what advances are needed towards the implementation of such strategies.

This 4-day workshop will take place from April 8th - 11th. On April 9th the workshop will be open to the public in Hall 1 of Building 19 from 9 am to 5 pm.



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King Abdullah University of Science and Technology (KAUST) www. kaust.edu.sa

#### **Tentative Agenda (details)**

Tuesday, 9 April - Research conference (open)

Hall 1, Building 19



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12:30 - 14:00	Lunch
14:00 - 14:40	Paving the way to a new monitoring era within European waters  Dr. Ángel Borja, AZTI
14:40 - 15:00	Using eDNA monitoring to inform decision-making in commercial and regulatory environments  Dr. Kat Bruce, Nature Metrics
15:00 - 15:20	Current approaches to assess invasions by marine non-native species: constraints, opportunities, and unknowns  Dr. Gregory Ruiz, Smithsonian Environmental Research Center
15:20 - 15:40	On-going challenges and barriers to implementation of eDNA for routine biomonitoring  Dr. Nigel Keeley, Institute of Marine Research
15:40 - 16:15	Coffee Break
16:15 - 17:00	Wrap-up and discussion



### Research Workshop

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## Workshop Participants

Dr. Xavier Pochon, The Cawthron Institute, New Zealand

Dr. Angel Borja, AZTI, Spain

Dr. Nigel Keeley, Institute of Marine Research, Norway

Dr. Anastasija Zaiko, The Cawthron Institute, New Zealand

Dr. Kat Bruce, Nature Metrics, UK

Dr. Gregory Ruiz, Smithsonian Environmental Research Center, US

Mr. Yasser Kattan, Saudi Aramco, KSA

Dr. Tyas Hikmawan, Saudi Aramco, KSA

Dr. Ahmed Al-Ansari, GAMEP, KSA

Dr. Talal Almeelbi, GAMEP, KSA

Dr. Ammar Saleem, GAMEP, KSA

Mr. Sultan Alamer, GAMEP, KSA

Mr. Shuaib M. Thaiparampil, NAQUA, KSA

Mr. Ismail Kalliyan, NAQUA, KSA

Prof. Peiying Hong, KAUST, KSA

Prof. Daniele Daffonchio, KAUST, KSA

Dr. Nathan Geraldi, KAUST, KSA

Prof. Burton J. Jones, KAUST, KSA

Prof. Carlos Duarte, KAUST, KSA

Prof. Michael Berumen, KAUST, KSA

Dr. Darren Coker, KAUST, KSA

Dr. Laura Gajdzik, KAUST, KSA

Dr. Eva Aylagas, KAUST, KSA

Dr. Susana Carvalho, KAUST, KSA

