DOSI Marine Genetic Resources (MGR) Working Group

**ZOOM CALL – 17 JULY 2019**

Suggested **topics** to focus on going forward:

1. **New/ emerging technology linked to R&D involving MGR** (from initial stages of discovery of MGR in sediment/ water column through to utilisation and later stages in the value chain) (reach out to the DOSI New Technologies working group). This could incorporate sub-topics such as
   1. There is currently a lack of information regarding gene sequences and associated annotation. Scientists often find themselves reverting back to terrestrial equivalents - how can this be overcome?
      1. The Genomics Standards Consortium could be useful here - <https://press3.mcs.anl.gov/gensc/>
   2. What tools currently exist to manipulate gene sequences and how could this be improved?
   3. Preservation of organisms/ sediment at depth (and high pressure) and subsequently bringing material up to the surface can be challenging – what alternative technology/ recent technological advances could be investigated in order to overcome this challenge?
   4. A number of research vessels are equipped with out-dated technology/ equipment – how can we promote more advanced, modern technological standards for these vessels?
   5. How could modernised technology lead to faster, cheaper, more autonomous and more sustainable activities? Perhaps it could be useful to assess current needs for new technology linked to deep ocean science and MGR? Link to Decade of Deep Ocean Science (reach out to the DOSI Decade of Deep Ocean Science working group)
   6. How can we build on the Census of Marine Life (<http://www.coml.org/>)? What geographical scale should be considered (i.e. distances between stations)? How can autonomous technology be developed for organisms of all size, not only micro- but also macro-fauna?
2. **Citizen science**
   1. How can citizen science together with new technology lead to advanced local, regional and global knowledge linked to MGR?
   2. Investigate opportunities for citizen science and technology adapted to local/ unique situations – for example, large ocean foundations may provide technology which could be adapted by local citizens according to different unique situations, potentially leading to enhanced generation of marine/ MGR related information
3. **Climate Change and Ocean acidification**
   1. Impact of climate change and ocean acidification on long-term MGR biodiversity (reach out to the DOSI Climate Change working group)

Suggestions for how we can form and provide **meaningful contributions**:

1. **Decade of Deep Ocean Science** 
   1. The DOSI Decade of Deep Ocean Science working group held a zoom call earlier today to discuss the design criteria for a global survey / sampling programme as part of the Decade of Ocean Science. Members of the MGR group participated in this call and made very interesting suggestions regarding how we could potentially collaborate. Joint efforts could include investigation into questions such as:
      1. How can we secure the future biodiversity of MGR in the deep sea (up to year 2050 and beyond)?
      2. What do we need to do to ensure that we can adhere to standards that we identify regarding preservation of marine genetic diversity'?
      3. What is the role of new/ emerging technology (such as AI) linked to R&D involving MGR?
   2. Note that Decade of Ocean Science is not only to support science, but also for sustainable development regarding industry. This can be important for governments in terms of leasing for deep-sea mining and oil & gas activities
2. **Industry** (deep-sea mining, oil and gas, other sectors requiring Environmental Impact Assessments/ Statements) (reach out to DOSI Minerals and Oil & Gas working groups)
   1. Involvement with industry could be useful, particularly considering the fact that governments increasingly require Environmental Impact Statements from private sector entities prior to initiating activities
   2. The UN Global Compact Action Platform for Sustainable Ocean Business (<https://www.unglobalcompact.org/take-action/action-platforms/ocean>) – we could feed into obligations and commitments such as those related to EIA/ EIS and other impacts (<https://www.unglobalcompact.org/library/5711>)
3. **Sustainable Development Goals** (SDGs)
   1. In particular SDG 14 (Life Below Water)
4. **CBD COP**

Other discussion points:

* Biodiversity Beyond National Jurisdiction (BBNJ):
  + With regards to the upcoming BBNJ IGC-3, 19-30 August, the group agreed to coordinate with the DOSI BBNJ WG to ensure our comments on the draft text of the BBNJ agreement (<https://undocs.org/a/conf.232/2019/6>) would be reflected in the compiled list.
  + Marcel Jaspars and Jeff Ardron indicated that they will be attending. The DOSI delegation will include Harriet Harden-Davies, Jeffrey Marlow, Judith Gobin, Muriel Rabone, Aria Finkelstein and Jane Collins.
  + It was also agreed to make ourselves available for the DOSI-related meetings, to provide expertise, as required. Jeff added that the Commonwealth Secretariat plans to hold two closed meetings for Commonwealth coordination, the first Tuesday (20 Aug) and the last Thursday (29 Aug), and would appreciate experts letting him know if they would be available to attend to answer technical questions that may arise. He noted, that it would probably be a last-minute request, to those already attending, should MGR issues be put onto the agenda by states –most likely the second meeting (Thursday 29 Aug)
  + Marcel Jaspars – side event proposal submitted with IUCN, DOSI and University of Aberdeen on the topic of ‘Developing Mare Geneticum: notifying, sharing, rewarding and sustaining’ – Thursday 22 August

Next steps:

* Reach out to other DOSI working groups (Decade of Deep Ocean Science, perhaps also New Technologies, Minerals, Oil & Gas, Climate Change) to discuss potential collaboration
* Establish key questions that need to be considered regarding:
  + What is the diversity of MGR and how can this be preserved long-term?
  + What is the role of new/ emerging technology for R&D linked to MGR?
* Consider output options (workshop/ paper for publication/ policy brief) and target impacts (particular fora/ target audience)