Summary of the UN Ocean Conference 2022 – One Sustainable Ocean Side Event: Marine Life Observations: Integrating biology and ecology observations to enable indicators for conservation, restoration, and sustainable development of marine and coastal ecosystems

Biodiversity information is a pillar of the Blue Economy; society benefits directly from the diversity of marine life and the ecosystem services it provides. Long-term, sustained monitoring of marine life, when integrated with physical, chemical, and socio-economic information provides compelling and extremely useful information for policy and decision-makers. This knowledge is fundamental to sustaining development and conserving living marine resources.

The UN Ocean Decade Conference (UNOC) was an opportunity to bring this vision to reality, to satisfy local needs and national reporting requirements for targets of Sustainable Development Goals, the UN Decade of Ocean Science for Sustainable Development, and the post-2020 Global Biodiversity Framework of the Convention on Biological Diversity.

Good marine life science and data are needed to make every decision involving the ocean. Experts and stakeholders met during this UNOC side event on June 28, 2022, to discuss existing efforts and review co-design strategies targeting the integration of biological observations/ocean observing systems and monitoring programs for ocean conservation in collaboration with the Marine Biodiversity Observation Network (MBON), the Global Ocean Observing System (GOOS), the Ocean Biodiversity Information System (OBIS), the Ocean Best Practices System (OBPS), and other groups. Collaborations, monitoring networks and common standards are in place to support marine life monitoring and to exchange and adapt our knowledge for the benefit of human communities. Yet significant gaps in investment and understanding still exist. Therefore, the experts and stakeholders call on nations, scientists, sponsors, and stakeholders to:

1. Invest in long-term efforts to provide and share knowledge about marine life and its changes in the face of multiple stressors to enable the conservation, management and sustainable use of Ocean ecosystems.

2. Encourage the use of standards and best practices for marine life data and metadata collection and sharing [Essential Ocean Variables (EOV), Essential Biodiversity Variables (EBV), following Findable, Accessible, Interoperable, Reusable (FAIR) principles and CARE Principles for Indigenous Data Governance (Collective Benefit, Authority to Control, Responsibility, and Ethics)].

3. Provide a space for meaningful dialogue among stakeholders, seeking collaborations to conserve and conduct responsible use of the Ocean, including deep ocean, marginal seas, and coastal ecosystems in the context of sustainable development goal 14 (SDG 14).

4. Increase co-production of knowledge and capacity development, to lessen regional inequalities and ensure informed collection and application of biodiversity and ecosystem information to address human community needs.

5. Increase support for the coordination and collaboration of regional efforts for a successful UN Decade of Ocean Science for Sustainable Development.

No single nation or group can alone advance the goals of a Marine Life 2030 initiative endorsed by the UN Decade of Ocean Science for Sustainable Development. This grand challenge requires robust collaborations across the globe so that each community has the information needed to adapt and plan for resilience and sustainable use of the ocean.

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