



# Commons Select Committee inquiry into Sustainable Development Goals

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## Response coordinators:

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## Input:

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## About us:

The National Oceanography Centre (NOC, [www.noc.ac.uk](http://www.noc.ac.uk)) was formed on 1 April 2010 by bringing together into a single institution the Natural Environment Research Council's activity at the National Oceanography Centre, Southampton (NOCS) and the Proudman Oceanographic Laboratory (POL) in Liverpool. The NOC works in close partnership with the wider marine science community to create an integrated research capability. NOC is the focus for UK oceanography

## Declaration of interests:

The NOC welcomes the opportunity to respond to the Commons Select Committee Inquiry into Sustainable Development Goals. The NOC hosts the UK delegation to UNESCO-Intergovernmental Oceanographic Committee, as directed from DFID, via the FCO and NERC respectively. NOC also has strong interactions with the Foreign and Commonwealth Office. The Natural Environment Research Council (NERC) is the NOCs parent body. NERC has been apprised of this consultation response.

## Date of Submission:

2nd September 2015

## Inquiry Response:

### *Prioritisation of Sustainable Development Goals*

- [1] A major challenge to the future of humankind, and the protection of the ecosystems that support all life on our planet, is to achieve sustainable development. The United Nations champions a set of Sustainable Development Goals (SDGs). These build on the previous Millennium Development Goals (MDG, ending in 2015). **An ocean focussed SDG has been developed and approved** (SDG 14, '**Conserve and sustainably use the oceans seas and marine resources for sustainable development**'; appendix 1). This is a huge step forward in terms of protecting and managing the ocean and has been widely welcomed by the international marine science and policy community.
- [2] The **oceans regulate global climate and weather**, as well as **providing humans with natural resources** such as food, minerals, energy and they are essential for international trade and recreational/cultural activities<sup>1</sup>. As such the oceans and coasts are critical for human wellbeing, for example:
- Over 3 billion people depend on marine and coastal resources for their livelihoods<sup>1</sup>
  - Fish provide 4.3 billion people with at least 15% of their intake of animal protein<sup>2</sup>
  - At least 90% of the volume of global trade is seaborne<sup>3</sup>

- Approximately 50% of all international tourists travel to coastal areas. In some developing countries, notably Small Island Developing States (SIDS), tourism can account for over 25% of GDP<sup>4</sup>
- The global oceans-based economy is estimated at between USD 3-6 trillion/year<sup>5</sup>
- Oceans capture and store about 30% of carbon dioxide produced by humans<sup>6</sup>
- Mangroves and coral reefs offer shoreline protection. Global coral reefs protect around 150,000 km of shoreline in more than 100 countries and territories<sup>7</sup>
- Marine phytoplankton produces 50% of oxygen on Earth<sup>8</sup>

[3] The development of SDG 14 builds on multiple MDGs including; 1 ('Eradicate extreme hunger and poverty'), 7 ('Ensure environmental sustainability'), and 8 ('Develop a global partnership for development')<sup>9</sup> and connects to all other SDG's either directly or indirectly<sup>10</sup>. **Specific linkages** between the goals can be defined through either the **ecosystem services** provided by the ocean, (e.g. food provision and climate stability – SDGs 7, 11, 12, 13 and 15), or the **societal transformation processes** (e.g. financing and capacity building – SDGs 1, 8, 9, 12, 16 and 17), which both integrate the ocean (SDG 14) into sustainable development trajectories<sup>11</sup>. SDG 14 has **strong synergies with SDG 6** ('Ensure availability and sustainable management of water and sanitation for all') **and SDG 15** ('Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss').

[4] Typically increasing human wellbeing through environmental exploitation is perceived as being detrimental to ecosystem integrity, i.e. there is a trade off. Thus, **alongside the SDG synergies there may also be trade offs**, for example between SDG 14 and SDG 2 to 'End hunger, achieve food security and improved nutrition, and promote sustainable agriculture'<sup>11</sup>. (Increasing food production from the ocean may detrimentally impact the environment). However if managed appropriately (through sustainable use of resources, good governance, changes in production and consumption patterns and scientific excellence) the negative anthropogenic impacts can be reduced<sup>10</sup>.

[5] Clearly the oceans represent a nexus of environmental and societal impacts and issues, which affect both the developing and the developed world and cross cut through many of the other issues addressed by the remaining SDGs. As a result it is the **opinion of the National Oceanography Centre that DFID considers SDG 14, ('Conserve and Sustainably use the Oceans, Seas and Marine Resources for Sustainable Development') in its future prioritisation and implementation of the SDG, both from a UK and international perspective.**

#### *Strategic approach to implementing SDG 14*

[6] In order to implement any of the SDGs, **international, regional and national coordination and governance** are needed. For example the implementation of SDG 14 will be facilitated through platforms such as the Intergovernmental Oceanographic Commission (IOC), European Commission, Regional Bodies (e.g. OSPAR) and national policy implementation (discussed further in paragraph 12). Such coordination helps to facilitate and focus excellent scientific research, which is essential to underpin many of the targets within SDG 14, as well as promoting free and open access to data.

[7] National and international coordination of research must **address cross-sectorial needs and be integrative of social and natural sciences**. Such holistic approaches to social and natural science programmes can be challenging due to differing research methods, geographical scales and the funding calls (traditionally targeted at single sector programmes). Furthermore, ensuring that collected data is free and openly accessible is challenging at all levels (national to international). Without access to the data, SDG targets cannot be refined, progress or their achievement measured. As such, strategic approaches to open access data management,

such as those taken by the British Oceanographic Data Centre (BODC<sup>12</sup>), the European Initiative EMODNET<sup>13</sup> and research programmes like FixO<sub>3</sub><sup>14</sup> will be beneficial to the achievement of SDG 14.

- [8] The scientific understanding of the ecosystem influence on human well-being (including job creation and sustainable livelihoods) is relatively strong. However, the scientific knowledge regarding the evaluation of benefits derived from marine resources and ecosystem services is weak. As such there is a need for a more **systematic global and regional approach to fully integrated (social and natural science) scientific assessments** following examples such as the international World Ocean Assessment<sup>15</sup> and national assessments such as Charting Progress 2<sup>16</sup>, addressing the human and environmental nexus. Furthermore a systems approach to tackle SDGs needs to be employed, tackling multiple goals concurrently rather than on an individual basis. Without such an approach achievement of the SDGs is unlikely<sup>11</sup>. Such a systems approach will allow synergies and trade offs [as discussed in paragraphs 3 and 4] between SDGs to be fully exploited and balanced as needed.
- [9] The **transfer of lessons learnt, and knowledge between research programmes and user communities** is also critical in the achievement of SDG-14. The UK is one of the prominent players in the science to policy interface in Europe, ensuring that there are appropriate mechanisms in place to transfer knowledge from the science community to users. Within Europe the Horizon 2020 research programme, COLUMBUS<sup>17</sup> (of which NOC is a partner), which is focussing on the systematic analysis of knowledge transfer from previously funded marine programmes, within the Framework Programme funding rounds.
- [10] With regards to the implementation of SDG 14 an **integrated approach incorporating all scales of impact and influence** is needed. This includes a holistic approach to the implementation of the SGD targets including:
- Linking social and natural sciences into joint research programmes to develop knowledge to underpin the SDG targets
  - Linking the terrestrial and coastal regions together, specifically addressing the impact of land based activities on the marine and coastal environments (e.g. marine pollution)
  - Promotion of an ecosystem approach to the management of the environmental targets, including improving understanding the effects of cumulative impacts on non-linear response systems, such as ecosystems found in the ocean<sup>10</sup>.
- [11] Achievement of SDG 14 extends **beyond the EEZ of UK waters**. Small Island Developing States such as those UK overseas territories in the Caribbean (and beyond) are particularly vulnerable to the challenges outlined in SDG 14, because seas and marine resources play a central role in their culture and are tightly linked to their economies. As such the FCO will likely also play a role in the implementation of SDG 14 in such UK overseas territories.

#### *Activities complementary to the implementation of SDG 14*

- [12] Internationally SDG 14 links into the priorities of the **UNESCO Intergovernmental Oceanographic Commission (IOC)**, the purpose of which is to promote international cooperation and to coordinate programmes in research, services and capacity-building, in order to learn more about the nature and resources of the ocean and coastal areas and to apply that knowledge for the improvement of management, sustainable development, the protection of the marine environment, and the decision-making processes of its Member States<sup>18</sup>. The UK is represented at IOC by the UK-IOC<sup>19</sup> delegation, which is hosted by the National Oceanography Centre<sup>20</sup>. The head of the UK Delegation, Mr Stephen Hall, has been elected as one of the Officers of IOC, serving as Vice-Chair 2015-2017 representing UNESCO Group 1 member states (North America,



Western Europe plus Greece, Turkey and Israel). This will allow the UK to better coordinate international activities underpinning SDG 14.

[13] **At European Level SDG 14 links into the Blue Growth Agenda** (the long term strategy to support sustainable growth in the marine and maritime sectors as a whole)<sup>21</sup> and the marine policies being developed / implemented to protect / manage the European Marine Environment. Examples of policy development / implementation include the Marine Strategy Framework Directive<sup>22</sup> (MSFD; to more effectively protect European coasts and seas)<sup>23</sup> and the Maritime Spatial Planning Directive<sup>24</sup> (to plan when and where human activities take place at sea ensuring these are as efficient and sustainable as possible)<sup>25</sup>.

[14] The marine policy being implemented at a national level in the UK also feeds into the sustainable development goals. For example the **national implementation of the EU MSFD and Marine Spatial Planning** as well as the passing of the **Marine and Coastal Access act in England** and its subsequent actions including the creation of **Marine Protected Areas**, and the publication of the coordinated Marine Policy Statement across the Devolved Administrations, improving national marine coordination.

#### *Measuring progress of SDG 14 implementation*

[15] Overall the development of SDG 14 is timely and ambitious. The current targets that have been set are all relevant and support sustainable development of the ocean in terms of both environmental protection and economic development. Nevertheless some of the targets set out in SDG 14 are not sufficient to ensure that progress is tangible / satisfactory. For example 14.1 calls for significant reduction in 'pollution of all kinds'. Although broadly encompassing and ambitious, it is not necessarily specific enough to allow for targeted progress to be made<sup>11</sup>. As such where possible quantifiable targets should also be set in order to measure the progress of SDG implementation. Indicators of SDG progress should include **policy relevant indicators** (e.g. percentage of marine areas protected), **pressure indicators** (e.g. amount of nutrients entering the ocean from the land) and **environmental status indicators** (e.g. change in ocean heat content or ocean acidification).

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<sup>1</sup> Secretariat of the Convention on Biological Diversity, Booklet: Biodiversity for Development and Poverty Alleviation (2012)

<sup>2</sup> FAO, The State of World Fisheries and Aquaculture (2012)

<sup>3</sup> IMO, International Shipping Facts and Figures: Information Resources on Trade, Safety, Security, Environment (2012)

<sup>4</sup> UNWTO, Secretariat of Ramsar Convention on Wetlands, Destination Wet Lands: Supporting Sustainable Tourism (2012)

<sup>5</sup> IOC/UNESCO, IMO, FAO, UNDP, A Blueprint for Ocean and Coastal Sustainability

<sup>6</sup> UNEP (2009): The Natural Fix?: The Role of Ecosystems in Climate Mitigation

<sup>7</sup> United Nations General Assembly resolution A/66/298 (2011). Protection of coral reefs for sustainable livelihoods and development

<sup>8</sup> IOC/UNESCO, IMO, FAO, UNDP, A Blueprint for Ocean and Coastal Sustainability (2011)

<sup>9</sup> Visbeck, M., U. Kronfeld-Goharani, B. Neumann, W. Rickels, J. Schmidt, E. van Doorn, N. Matz-Lück, K. Ott and M. F. Quaas (2014). "Securing blue wealth: The need for a special sustainable development goal for the ocean and coasts." *Marine Policy* **48**: 184-191.

<sup>10</sup> United Nations Department of Economic and Social Affairs (2015) Global Sustainable Development Report, Advanced Unedited version

<sup>11</sup> ICSU, ISSC (2015): Review of the Sustainable Development Goals: The Science Perspective. Paris: International Council for Science (ICSU)

<sup>12</sup> <http://www.bodc.ac.uk/>

<sup>13</sup> <http://www.emodnet.eu/>

<sup>14</sup> [www.fixo3.ac.uk](http://www.fixo3.ac.uk)

<sup>15</sup> <http://www.worldoceanassessment.org/>

<sup>16</sup> UKMMAS (2010) Charting Progress 2, An assessment of the state of UK seas

<sup>17</sup> <http://www.aquatt.ie/horizon-2020/228-projects/horizon-2020/1178-columbus>



<sup>18</sup> <http://ioc-unesco.org>

<sup>19</sup> [www.uk-ioc.org](http://www.uk-ioc.org)

<sup>20</sup> [www.noc.ac.uk](http://www.noc.ac.uk)

<sup>21</sup> [http://ec.europa.eu/maritimeaffairs/policy/blue\\_growth/](http://ec.europa.eu/maritimeaffairs/policy/blue_growth/)

<sup>22</sup> DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, 2008/56/EC, Establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), [2008], L 164/19

<sup>23</sup> [http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index\\_en.htm](http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm)

<sup>24</sup> DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, 2014/89/EU, Establishing a framework for maritime spatial planning, [2014], L 257/135

<sup>25</sup> [http://ec.europa.eu/maritimeaffairs/policy/maritime\\_spatial\\_planning/index\\_en.htm](http://ec.europa.eu/maritimeaffairs/policy/maritime_spatial_planning/index_en.htm)