

**Date:** Wednesday 4<sup>th</sup> March 2020

**Time:** 10.00 – 16.00

**Location:** Video Conference, hosted by NOC (VScene)

## In attendance

### Chair & Vice-Chair

Matthew Palmer (MP)	.....	NOC
Alejandro Gallego (AG)	.....	Marine Scotland

### Attendees

Adam Mellor (AM)	.....	AFBI
Andrew Dale (AD)	.....	SAMS
Chelsea Bradbury (CB)	.....	The Crown Estate
Clare Postlethwaite (CP)	.....	BODC/MEDIN
David Johns (DJ)	.....	MBA
Gus Jeans (GJ)	.....	OOSIG
James Fishwick (JF)	.....	PML
Jason Holt (JH)	.....	NOC
Jon Rees (JR)	.....	Cefas
Jon Turton (JT)	.....	Met Office
Karen Webb (KW)	.....	JNCC
Katy Hill (KH)	.....	NOC
Penny Holliday (PH)	.....	NOC
Ralph Rayner (RR)	.....	OOSIG
Sophie Pitois (SP)	.....	Cefas
Veronique Creach (VC)	.....	Cefas

### Secretariat

Abigail Marshall (AMa)	.....	MSCC/NOC
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### Apologies

Aisling Lannin (AL)	.....	MMO
John Siddorn (JS)	.....	Met Office
Matt Frost (MF)	.....	MBA
Matt Service (MS)	.....	AFBI
Rick Bruintjes (RB)	.....	Defra
Stephen Dye (SD)	.....	Cefas
Tarquin Dorrington (TD)	.....	Defra

## Item 1.0: Welcome, Introductions & Apologies

Matthew Palmer (MP) welcomed the attendees and allowed members to introduce themselves. MP highlighted that the executive team is growing in number and for some of the attendees today was their first UK-IMON meeting. MP extended his welcome particularly to those newcomers.

Apologies were given from Aisling Lannin, John Siddorn, Matt Frost, Matt Service, Rick Brintjes, Stephen Dye and Tarquin Dorrington.

## Item 1.1: Approval of agenda & AOB

MP informed the members that there would be a slight change to the agenda. As one of the primary objectives of the meeting was to encourage attendees to think about how well monitoring efforts are coordinated, gap analysis and how to achieve successful coordination, presentations on different monitoring networks would be given. Katy Hill (KH) would present on IMOS (the Australian Integrated Marine Observing System), Karen Webb (KW) would present on the recent UK Marine Biodiversity Monitoring Programme, and Ralph Raynor (RR) would present on the IOOS (the US Integrated Ocean Observing System).

## Item 2.0: Approval of previous minutes

The minutes from 8<sup>th</sup> October 2019 were approved.

## Item 2.1: Actions from previous minutes

The following table is from the previous minutes with comments reflecting notes from the current meeting. Actions in bold will be removed from the next action table as they have been completed, and an updated table of actions with any ongoing, standing or new items can be found in Annex 1:

ACTIONS		
Action	Responsibility	Update
Approach Environment Agency and invite to join UK-IMON Executive	Chair	Ongoing.  MP said Roger Proudfoot was thinking more on how EA interact with UK-IMON and finding an EA staff member with the right seniority but with time to invest in UK-IMON. MP hopes to give an update before the next IMON meeting
Ensure wording consistent across all UK-IMON documents	Chair	Ongoing.
<b>Ensure biological community accurately</b>	<b>Sophie Pitois</b>	<b>Completed.</b>

reflected in UK-IMON outputs		MP thanks Sophie Pitois (SP) for her work, which in general received positive feedback.
Amend ToR and Objectives and send to Executive for comment	Chair	Ongoing.  MP has spoken with KH, Jason Holt (JH), Clare Postlethwaite (CP), John Siddorn (JS) and Penny Holliday (PH) regarding how blue water focussed the ToR and objectives should be. MP to redo the ToR by next week in time for the MSCC plenary submission.
Define role of Executive Member and Partner Member	Chair	Ongoing.
Ask NCEO to join UK-IMON Executive	Chair	MP stated that while NCEO are hugely important they have not traditionally been involved in UK-IMON. Given organisations represented by members in UK-IMON (e.g. PML, NOC, Cefas) do use satellite there is a desire for NCEO to actively be part of UK-IMON. MP will continue talks with Chris Merchant (UoReading) as to who could best represent NCEO marine interests.
Provide Chair with MMO contact	Jon Rees	<b>Completed.</b>  MP thanked JR for the contacts. MMO are questioning how/if they should be part of UK-IMON – these discussions between MMO and MP are continuing. MP hopes MMO will join given they are one of the main bodies who direct people to make certain observations. If MMO join, they will probably be a partner. MP

		<b>does acknowledge the resource limitations of MMO.</b>
Invite JNCC, The Crown Estate, Natural Resources Wales, the Northern Ireland Environment Agency, the Scottish Environment Protection Agency and MMO to join UK-IMON	Chair	<p>Ongoing but progressing well.</p> <p>MP welcomed the JNCC (KW) and The Crown Estate (Chelsea Bradbury – CB). CB questioned whether the Scottish Crown Estate should also be invited. MP said Natural Resource Wales would likely to be represented by Chris Jenkins.</p> <p>Adam Mellor (AM) said there was no update. DAERA typically represent themselves but AM will continue to pursue. Alejandro Gallego (AG) will continue to pursue SEPA. AG questioned whether Scottish Natural Heritage should be invited.</p> <p>MMO position as above. MP offered to present to the relevant organisations to get everyone around the table.</p>
Advise Chair of appropriate industry contacts	OOSIG Members	<p>Gus Jeans (GJ) said UK-IMON interactions with OOSIG were discussed at the last meeting and GJ will discuss this more with MP. Progress with industry an important objective of UK-IMON. GJ &amp; Ralph Rayner (RR) said IMarEST are organizing an event at Ocean Business in early 2021 though this is in the initial planning stages.</p> <p>MP still keen to know how UK-IMON can interact with the community that OOSIG</p>

		<p>represents (strong industry representation).</p> <p>GJ stated that some organisations will want direct contact with UK-IMON.</p> <p>RR suggested OOSIG to handle the UK-IMON/industry interface for the time being</p>
Advise Chair whether PML content to continue to host UK-IMON website	James Fishwick	<p><b>Completed.</b></p> <p>MP highlighted the outdated UK-IMON website. There is now a holding card whilst the website is being updated. The new website is to be hosted by NOC.</p> <p><b>ACTION: members are asked to contribute to the new webpage.</b></p>
If not, investigate NOC hosting site	Chair	<p><b>Completed.</b></p> <p><b>As above.</b></p>
Initiate NPOP Observations Modelling Activity Group	Chair and Jason Holt	<p>Ongoing.</p> <p>Attendees agreed this is important. NPOP meeting next week where this will be discussed further.</p>
Begin process of updating catalogue of current UK marine observing network	Chair	<p>Ongoing.</p> <p>MP stated that UKDMOS was very useful for UK activity (and research beyond UK waters). MP questioned how to use tools like UKDMOS to assess system as a whole.</p>
Initiate gap analysis into status of data delivery and accessibility and collation of relevant strategies	Chair	Ongoing.
Invoice Met Office for £6K	Chair	<p><b>Completed.</b></p> <p>Jon Turton (JT) confirmed the payment will complete</p>

		within the next few days and will contribute to UK-IMON T&S. MP thanked JT and the Met Office for this contribution
Trawl for date of next meeting	Chair/MSCC Secretariat	Completed.

### Item 2.2: Final review and approval of Terms of Reference

MP had discussions with KH, JS, JH, CP & PH regarding the Terms of Reference and therefore MP will look to update the ToR next week. The changes will ensure the terminology isn't solely focused on UK waters alone, though this is where much of the UK activity naturally lies. MP invited attendees to comment on the ToR.

A discussion followed after CP raised the issue of the word 'sustained' not being within the first sentence of the ToR in regards to long term ocean observing. CP stated the importance of UK-IMON representing sustained monitoring, not just ad-hoc observing. Many agreed. KH did highlight that many of the sustained observations are funded through research grants. CP said that MEDIN includes both short- and long-term datasets but there is a clear distinction between the two. MP concluded that the ToR and objectives within needed to acknowledge the short-term capability but with clear goals and constraints of UK-IMON. MP also asked for any other comments on the ToR to be emailed as soon as possible. **ACTION: MP to clarify the objectives and ToR, including careful consideration of terminology.**

### Item 3.0: UK-IMON workplan draft review

MP introduced this section by talking about the three working groups that he has suggested within the workplan: development of standards for UK ocean observing platforms, providing evaluation on the functionality of UK ocean observing systems and community engagement. MP asked whether they should be fixed, or whether each working group's focus would change making them valid now but potentially redundant later in time. MP asked for volunteers to drive these activities forward. **ACTION: Members to consider leading the different working groups.** MP hopes the working group objectives could align with/dove-tail ongoing projects.

#### Item 3.0.1: Development of standards working group

RR advised that, given the voluntary contributions required from already busy members, there are ways to reduce the time things will take to do certain activities. For example, there are standards for observations within the public domain, UK-IMON could base standards/best practice on national and/or international publicly available documentation.

David Johns (DJ) is Chair of the Northeast Atlantic BAQC (Biological Analytical Quality Control) Scheme and said many organisations (e.g. Cefas, Environment Agency) already use this as a rubber stamp of best practice for research and statutory monitoring. DJ suggested it could link in nicely to UK-IMON.

CP agreed that documents on best practice and standards already exist and encouraged the use of the OceanBestPractices website/project. MP suggested that an information gathering exercise needed to be done to find the cross system/sector best practices and standards. UK-IMON need to show the MSCC what gaps they are filling.

**ACTION: Collect information of best practice protocols currently in existence across different sectors and monitoring systems – nationally and internationally.**

*Item 3.0.2: Evaluation working group*

MP highlighted the importance of an updated directory of equipment as well as keeping equipment and tools updated and usable. UK-IMON has a role to ensure things are kept up-to-date. Some effort has been made towards this following action directed by the Marine Facilities Advisory Board (MFAB).

MP also noted that legislation that has data provisions as an obligation needs to be identified. CP suggested MEDIN needs to be involved within this group.

*Item 3.0.3: Community engagement working group*

GJ suggested that the IMarEST event at Ocean Business should be part of the MSCC plenary presentation. MP highlighted the UK-IMON/OOSIG interface shows working with the marine industry, which is particularly important at this time whilst the Marine Industry Group is still being refreshed. **ACTION: Discuss the opportunities of the Ocean Business event at the next ET meeting.**

*Item 3.0.4: General comments*

PH raised a concern that the work plan doesn't define what the actions or processes are going to be in order to meet the objectives. A plan of specific actions is required in order for the larger the work plan to happen. **ACTION: Devise specific short-term actions to be led by certain people and/or organisations – what needs to be started in the immediate future.**

MP suggested that extensive information gathering and gap analysis needs to be completed before a thorough work plan can be developed. The work plan will change slightly to be high level and long term in order to meet the group objectives. A 12 monthly review will be done to assess the progress of these objectives. **ACTION: Members to consider how they or their organisation can contribute to information gathering and gap analysis.**

### **Item 3.1: Presentation on IMOS by Katy Hill (UK G7 Co-ordinator)**

KH presented on the structure of the Australian Integration Marine Observing System (IMOS). Slides included:

- Why IMOS was established in 2006 – 2007: importance of the blue economy and a historical fragmented and unsustainable observing process
- Highlights of the national, collaborative and research infrastructure
- How IMOS works: community-driven science planning to determine what observations are needed through regional nodes
- Various national facilities (e.g. moorings, gliders, ships, satellite, animal tagging)
- Portfolio across open ocean, coastal and continental shelf with disciplines of biogeochemistry, biology & ecosystems, physics
- IMOS data is discoverable, open access, usable and reusable
- IMOS circle which demonstrates operation, use, research community and relevance and impact

- PH suggested this would be interesting across various projects/organisations.  
**ACTION: Members to look at replicating the IMOS circle for their own organisations or projects (Operated by – Used by – In generating – Relevant to).**
- **ACTION: MP to collate individual circles to create circle to understand range and reach of UK-IMON**
- Success of IMOS due to support across the national science community with an identified funding source and key performance indicators
  - 60% funding from stakeholders (including federal and state agencies, private sector), 40% core funding from the federal government
- National level strategic planning on Marine Science priorities, and positioning of national research infrastructure needs through the National Marine Science Committee, and a governance within IMOS which enables nationally coordinated planning and delivery
- Blue science for a blue economy

KH highlighted the importance of annual meetings that took place. Instead of organisations competing for funding, a funding stream called the National Collaborative Research Infrastructure Strategy required the national community of scientists, agencies and stakeholders to come together to agree on a plan, including priorities. This resulted in an IMOS with strong community buy in, aided by the backing of the National Marine Science Committee (and its predecessor, the Oceans Policy Science Advisory Group).

### Item 3.2: Presentation on IOOS by Ralph Rayner (OOSIG)

RR presented on the structure of the US Integrated Ocean Observing System (IOOS). Slides included:

- IOOS made of coastal (regional systems) and global (NOAA, NASA) components
  - Operational structure (user-driven) rather than research focussed
  - Improve predictions, safety, security, public health risks, protect ecosystems
- Brings together all agencies that one way or another acquire or use ocean data information
- Over half of funding goes into the Regional Coastal Ocean Observing System
- Network: 11 regional associations (observing systems), Alliance for Coastal Technologies (ACT), Southeastern University Research Association (SURA)
  - State, local, tribal government; profit & non-profit industries, academia
- Focus on data access, observations, models, education outreach
- Formal recognition of IOOS regional associations under the Integrated Coastal and Ocean Observation System Act (ICOOS Act) means it is a mandated activity therefore continually funded
- Alliance for Coastal Technologies (ACT) evaluates technology, capability and modelling
- Access to data online (ioos.us) is quality assured and abides by standards, includes empirical and modelled data
- Made up of IOOS Office, IOOS Advisory Committee, IOOS Association, IOOC

RR also said the IOOS type system (operational-focussed) was being exported to Canada.

Jon Rees (JR) asked what the impacts of the network were, such as improved weather forecasts, reduction in homeland incidences and asked whether a cost-benefit analysis had been done to see the impacts of the IOOS. RR replied that a socio-benefit analysis of IOOS regional associations was being conducted to quantify the benefit to users of IOOS datasets. The report is due out in



November this year. RR also said that he was leading a project to catalogue all ocean observation benefits at an international level, though this is at an early stage.

KH commented that she particularly liked the regional modelling as a component into the national programme and questioned how that could be strengthened around the UK. MP indicated the NPOP/IMON collaboration would try to take that forward.

MP asked how funding was coordinated. RR said statutory monitoring was largely delivered through state bodies. Annual business plans pitched for central funds though external funds were also raised.

### **Item 3.3: Presentation of UK Marine Biodiversity Monitoring Programme by Karen Webb**

KW presented an overview of the UK Marine Biodiversity Monitoring Programme that came out of a request of the UK Governments to the Healthy and Biologically Diverse Seas Evidence Group (HBDSEG). Slides included:

- JNCC led the development to propose options for a coordinated and integrated monitoring programme for all marine biological components across all UK waters
  - Monitoring should meet the needs of UK, EU and international assessments
  - Provide a more holistic ecosystem-based understanding of the marine environment
  - Develop more integration between monitoring schemes
- Main function is to identify state and changes in state for an ecological component of biodiversity and identify whether changes are due to natural change or as a result of anthropogenic activities
- Monitoring options for benthic, pelagic, marine birds, cetaceans, seals, fish & cephalopods
- 5 options from no targeted biodiversity monitoring all the way to monitoring all MPAs
- Policy preference given by UK Government, HBDSEG reviewed and recommended but funding not sufficient to achieve options; business case drafted for additional funding
- UK Biodiversity Monitoring Coordination Stabilisation review done
  - Identify issues to move towards each UK biodiversity monitoring being funded
  - Prioritise action and drive change towards stabilisation of programme
  - Make sure evidence collected is used to inform assessments of marine life in and outside of MPAs
- Framework of review included organisation, monitoring drivers, geographic scope, governance, external engagement, strategy, data sharing, sampling protocols, analysis, assessment, funding
  - Results in scoring 1 – 3 to indicate level of concern
- Continuing to review monitoring programmes (68 in all)

KW commented that this was largely driven by the HBDSEG community after the need was seen. No dedicated funding supported this, it benefited from contributions from smaller projects at JNCC with vested interest, but no central or Departmental investment. MP noted it was a valuable exercise and could be learnt from. PH asked whether this was a framework that UK-IMON wanted to replicate. MP noted how much work it has taken for this one system and given all systems would need this approach funding would definitely need to be sought in order to assess all the systems under UK-IMON. This is something MP may bring up at MSCC Plenary later this month.  
**ACTION: MP to meet with JNCC to understand the methodology and approach to this assessment.**

CP questioned how risky the policy makers were willing to go. KW explained that it was often only possible to meet the bare minimum required to meet legal obligations.

KW highlighted that this was at the UK level and working groups at each devolved administration would be required. KW also sits on a Defra monitoring coordination group which is England only. Though Defra is working at a higher level, KW hopes that the review will feed in for their recommendations. The Defra group has newly formed and is still working through its Terms of Reference. Rick Bruintjes is leading and supporting this group.

## Break for lunch 13.00 – 13.55

### Item 4.0: Development of UK-IMON

MP welcomed attendees back after the lunch break and asked for members to put forward ideas and thoughts on their current interests and/or concerns.

#### *Item 4.0.1: Gathering information & gap analysis*

RR suggested a coherent web presence was needed to show a national observing system – much of the observing currently being done is good but it is not portrayed well. MP agreed but said activities are needed to feed into that web presence. There is also the need to communicate what UK-IMON wants to do. **ACTION: Members to review and document their projects and all the different requirements and deliverables as part of the UK observing system – add to the new website.** PH commented that as UK-IMON is still in its infancy an information gathering stage is required. UK-IMON may not be fully integrated but does need to be a network. Questions about organisational drivers and deliverables, what data sets are accessible and open, what impacts UK-IMON does/could have all need to be understood better. **ACTION: Members to describe the accessibility of their data and information they have on how their data is used.**

KW asked whether a collation of all activities that UK-IMON is trying to coordinate across had been done. MP said only a limited version had been put together previously. JT said previous assessments focussed on 11 – 12 candidate observing systems but the requirements or capabilities were not fully assessed. **ACTION: Review what is currently in place, how good it is, what it is achieving, what standards it has – requirements and capabilities.**

GJ encouraged a gap analysis, but suggested a different gap perspective. UK-IMON can define where their current position is and where they want to get to, the gap is how to get there and what is required. **ACTION: Define the scope of UK-IMON.** Highlighting the benefits of the UK-IMON system to the MSCC at the next plenary would be important.

RR spoke of a library currently being developed by IOOS which will record cases across global ocean observing systems and will be open access. This is in very early development.

#### *Item 4.0.2: Benefits of a coordinated and integrated monitoring system*

Two papers at the recent HBDSEG meeting last week set the scene for monitoring. KW confirmed that MP could send the papers around to the UK-IMON members. **ACTION: MP to send round papers to ET & PRs.**

RR said the benefits of having an integrated monitoring system must be made. More support will be garnered if that case is made and made well. A discussion followed on the term ‘integrated’ and what that means. JT questioned if the aim was to be truly integrated, or rather individual

systems working well together. MP stated it was integrated in the sense the whole system is aware of activity across sectors and provides a bridge between sectors. **ACTION: Define the vision for an integrated system (what, why, when).** In the long term, PH suggested looking for and defining the potential increased benefit of a coordinated UK-IMON and ultimately a cost-benefit analysis.

MP asked about UKDMOS as it gives coverage of marine observing in some sectors. CP commented that UKDMOS is typically reviewed every year through MEDIN. The next financial year there will be updates to new content. However for it to be enhanced and to have an increased capability in what it can record, additional funding would be required. Observing systems operated in the industrial/commercial sector is not currently captured in UKDMOS, but it could theoretically be incorporated. PH asked whether members should update their activities in UKDMOS and find out what extra information should be added. **ACTION: Members to update activities in UKDMOS.**

JR spoke of ecosystem cruises – research cruises which monitor a range of ecosystem metrics (e.g. physical, ecological, biological, chemical). There is current enthusiasm for this type of multidisciplinary cruise at Cefas, various trials of different set ups, equipment and cross-agency staffing have been completed. **ACTION: JR to find a report documenting the various ecosystem cruise trials.** KH suggested a standardisation of what is observed, a tiering system (e.g. tier 1 collects the bare minimum, tier 2 collects important but non-crucial data, tier 3 collects a thorough breadth of data). Useful to have a comparable data collection and best practices. KH meeting with Leigh Storey who is the Associate Director for National Marine Facilities. JR invited KH to a meeting at Cefas. **ACTION: KH & JR to organise KH to visit Cefas.**

#### *Item 4.0.3: Funding routes*

JR commented on the current difficult landscape under government funding. Defra funding has severely reduced and due to constant reprioritising things like eutrophication research, chemical oceanography, fisheries surveys, dredging site monitoring have all taken a big hit and the bare minimum is done. Brexit has allowed for a modest increase in funding but only in areas where there is a little/weak evidence base to take to the negotiations table. KW agreed saying the monitoring programmes have been cut and reduced.

RR questioned whether funding should be sought through BEIS rather than Defra given the ever-decreasing levels of funds at Defra. MP suggested a UK model of an observing system/network may not be core funded as has been presented by IMOS or IOOS but more likely provide a solution for integration between coordination activity within sectors. KH suggested that a common voice will give strength to applications for funding at BEIS. KH role is funded by BEIS so will be a good link between UK-IMON and BEIS. JT reminded attendees of the Industrial Strategy Challenge Fund (ISCF) and how UK-IMON could feed into that to help generate future calls that may fund UK-IMON activity. **ACTION: Look into more detail into the ISCF to identify the mechanism for influencing future calls.** RR mentioned a current dialogue between the US and UK from the fallout of Brexit with regards to improved marine observations to help the UK blue economy thrive. **ACTION: UK-IMON should think about what is important for the UK Blue Economy/Natural Capital and what resources are required to support that.** Currently, different projects/programmes are typically funded separately. Could the total financial resource of UK observing systems be calculated, and could the coordination of these activities be separated out. **ACTION: Calculate financial resources of all UK observing systems.** KW said costs linked to additional ask under the UK biodiversity monitoring was approximately £20 million for all components but no costs relating to coordination. RR stressed the importance of persuading stakeholders that coordination adds value – a greater yield can come from an integrated network. PH asked whether an ambition of UK-IMON could be to find resources to adequately perform coordination.

#### Item 4.0.4: Modelling capability

MP & AG stated they are to attend an NPOP meeting next week and will discuss what the current level of modelling capability is and how to integrate use of models and empirical evidence for assessments. MP informed the group this would be on a test case basis only at this point, not for real time operational work. AM commented that NI water and AFBI have been working together to bring empirical and modelling data to inform decisions. DAERA have now adopted modelling in a semi-operational capacity to help with certain decision making. **ACTION: AM to send MP report and information on models used in decision making based on NI Water & AFBI current set up.** AG questioned whether aquaculture models could be another source of information. **ACTION: AG to work with Sepa to get an understanding of models used with aquaculture.** RR stated that industry often use models.

#### Item 4.1: Long term vision of UK-IMON

KH highlighted that the UN Decade of the Ocean was kicking off next year. Much of the discussions have surrounded what the legacy of the decade might look like. KH put forward the question of what UK-IMON would look like in 2030. **ACTION: Members to think of UK-IMON legacy.** MP agreed that members need to think about defining the future landscape for UK-IMON. RR suggested doing a simple map of where we are, what we should be doing, and how to get there. Previous failures are attributable to IMON not considering the individual steps required to get from current capability to future aspirations. **ACTION: Define the UK-IMON vision for an integrated system with a timeline steps required to realise that.**

RR questioned whether delivery could be based around the UN Sustainable Development Goals. JH highlighted that NERC delivery is solution focussed: avoided loss and economical benefit. KH commented that the government makes it difficult to have a coherent marine focus – lots of departments understand the importance of marine but it's all very disparate as reflected in the multiple strategies that include marine in some form. **ACTION: Collate all government strategies that include a marine theme to better understand the different visions of the marine sector across the UK government**

#### Item 5: Any Other Business

CP briefed the group on the recent MEDIN cost benefit analysis (CBA). The CBA was conducted by an independent economist who looked at the benefits of MEDIN by surveying a number of marine networks to assess how much time they saved through the services that MEDIN supply. This was complemented with user time costs and running costs of MEDIN. Due to lack of responses, it was not possible to quantify decision making, but a qualitative response was used. CBA ratio of 8 was found, showing a brilliant return of investment. A survey by MEDIN is due to be conducted in order to quantify data use by users. A discussion followed regarding experience of CBAs and applying it to UK-IMON. RR and KW have some experience in this area.

MP asked if everyone was happy to use [UKMAR](#) for sharing data, information and documents in a secure manner. The group agreed to use UKMAR. **ACTION: MP to contact DEFRA to arrange UKMAR pages and access for members.**

JT informed the group of some approved funding for UK observing coming through the recently granted High Powered Computing (HPC) government pledge. The expectation is for UKMO investment in marine autonomous vehicles to update UK shelf observations to support

operational forecasting. JT is meeting with MP and Maaten Furlong (NOC, MARS head) next week to discuss the next steps.

MP informed the group of early discussions to hold a joint IMON-NPOP workshop to better develop stakeholder engagement and interaction between the groups and obs-modelling communities.

**ACTION: Develop objectives and agenda of a joint IMON-NPOP workshop and identify date/venue.**

### **Item 6: Next Meeting**

MP thanked everyone for attending the meeting. The date and location of the next meeting was discussed. This will be a face to face meeting in approximately 6 months time. A potential date of Tuesday 6<sup>th</sup> October in Glasgow was suggested as it would be the day before the MASTS annual meeting. **ACTION: MP, AG & AMa to finalise dates and arrangements for next meeting.**

## Annex 1 – Updated Actions

Item number	Action items	Responsibility	Deadline
M20.01	Approach Environment Agency and invite to join UK-IMON Executive	Chair	Ongoing
M20.02	Ensure wording consistent across all UK-IMON documents	Chair	Ongoing
M20.03	Amend ToR and Objectives and send to Executive for comment	Chair	11 <sup>th</sup> March 2020
M20.04	Define role of Executive Member and Partner Member	Chair	Ongoing
M20.05	Ask NCEO to join UK-IMON Executive	Chair	Ongoing
M20.06	Consider inviting The Scottish Crown Estate to join UK-IMON	Chair Chelsea Bradbury	Ongoing
M20.07	Pursue SEPA, NI EA, MMO for UK-IMON membership	Alejandro Gallego Adam Mellor Matthew Palmer	
M20.08	Update on how UK-IMON can interact with industry	Chair OOSIG members	Ongoing
M20.09	Contributions to the new UK-IMON website (e.g. projects and observing capabilities)	Members	Ongoing
M20.10	Update on the NPOP/IMON Activity Group	Chair	Ongoing
M20.11	Begin process of updating catalogue of current UK marine observing network	Chair	Ongoing
M20.12	Initiate gap analysis into status of data delivery and accessibility and collation of relevant strategies	Chair	Ongoing
M20.13	Consider leading one of the working groups within UK-IMON	Members	Ongoing
M20.14	Collect information of best practice protocols currently in existence across different sectors and monitoring systems both nationally and internationally	Chair	Ongoing
M20.15	Consider doing or driving the gap analysis	Members	Ongoing
M20.16	Discuss the opportunities of the Ocean Business event at the next ET meeting	Members	October 2020
M20.17	Define the short-term actions within the work plan	Members	Ongoing
M20.18	Members to replicate 'IMOS circle' for their own individual projects and/or organisations	Members	Ongoing
M20.19	Collate individual circles to create circle to understand range and reach of UK-IMON	Chair	Ongoing
M20.20	UK-IMON and JNCC to meet to discuss UK Marine Biodiversity Monitoring assessment	Matthew Palmer Karen Webb	
M20.21	Members to review and document their projects and all the different requirements and deliverables as part of the UK observing system	Members	Ongoing
M20.22	Describe the accessibility of their data and information they have on how their data is used	Members	Ongoing

M20.23	Collect information of what systems currently exists, how good they are, what it is achieving what standards they use. What are the deliverables and requirements?	Chair	Ongoing
M20.24	Define the scope of UK-IMON	Chair	Ongoing
M20.25	Send around two HBDSEG papers on setting the UK monitoring landscape	Matthew Palmer	Ongoing
M20.26	Define the vision for an integrated system (what, why, when)	Chair Members	Ongoing
M20.27	Members to update activities in UKDMOS	Members	Ongoing
M20.28	Find and send report on ecosystem cruise trials	Jon Rees	Ongoing
M20.29	Meeting between Cefas and G7 coordinator	Jon Rees Katy Hill	Ongoing
M20.30	Look into more detail into the ISCF to identify the mechanism for influencing future calls.	Chair	Ongoing
M20.31	UK-IMON should think about what is important for the UK Blue Economy/Natural Capital and what resources are required to support that	Chair Members	Ongoing
M20.32	Calculate financial resources of all UK observing systems	Chair Members	Ongoing
M20.33	Send report on modelling use within decision making at AFBI/NI Water	Adam Mellor	4 <sup>th</sup> March 2020
M20.34	Contact SEPA to understand their use of models in aquaculture decision making	Alejandro Gallego	Ongoing
M20.35	Ideas of the UK-IMON legacy	Members	Ongoing
M20.36	Define the vision for an integrated system along with a timeline and specific actions	Members	Ongoing
M20.37	Collate all government strategies that include a marine theme to better understand the different visions of the marine sector across the UK government	Katy Hill	Ongoing
M20.38	Contact DEFRA to arrange UKMAR pages and access for members	Chair	Ongoing
M20.39	Develop objectives and agenda of a joint IMON-NPOP workshop and identify date/venue.	AG, MP, NPOP	April
M20.40	Organise next meeting for October	Chair Vice-Chair Abigail Marshall	May