**Progress on procedures for the review of the NODC health status within the IODE network 16 March 2023 – for discussion**

The mission of an NODC is to provide access and stewardship for the national resource of oceanographic data (see: [Guide for Establishing an IODE National Oceanographic Data Centre, IODE Associate Data Unit or IODE Associate Information Unit (3rd revised edition)](https://oceanexpert.org/document/30863)). This task requires the gathering, quality control, processing, summarization, dissemination, and preservation of data generated by national and international agencies.

The full range of data management tasks to be carried out by a national oceanographic data management “system” can be summarized as follows:

* receiving data from national, regional and international programmes collecting oceanographic data;
* verifying the quality of the data (using agreed upon standards);
* ensuring the long term preservation of the data and associated information required for correct interpretation of the data; and
* making data available, nationally and internationally.

During IODE-XXV (2019) it was suggested that that a review exercise should be carried out to identify those NODCs that are no longer active and to investigate why they have become inactive. Moreover if there is still an interest in developing data management services then these centres should be provided with the necessary guidance to restart their activities.

To pursue this objective Decision IODE-XXV.3.2.4 (Establishment of an Inter-sessional Working Group on the Review of NODC health status within the IODE network)was adopted. Unfortunately the Working Group was not able to complete its task so in preparation for IODE-XXVI, a pre-committee working group was established to r**eview of NODC health status within the IODE network. This group met on 18 February 2021 and discussed how the health of NODCs could be measured and was informed of the system in place for OBIS nodes.**

The IODE Steering Group for OBIS evaluates the health status of OBIS nodes at each annual Steering Group meeting (see Appendix 1). The OBIS secretariat prepares a health status check report of each OBIS node based on a check list of six items and informs the OBIS node manager on their status 3 months before the SG meeting. An OBIS node is considered inactive when it meets any of these criteria. At the Steering Group meeting the results of the health check are presented including a listing of the inactive OBIS nodes.

Taking into account the information and checklist provided by OBIS, their suggestion that it is valuable to be able to check the status independently, and the full range of data management tasks of an NODC (noted above), a preliminary checklist for the health status of NODCs has been drawn up and is given below together with some comments. A few of the items require input from the NODC, but other items can be independently checked. Further work is needed to determine the NODC health check process, for example, how frequently it should be carried out, precisely which checks need to be met for an NODC to be considered active and how inactive NODCs can be assisted to become active again. It is suggested that the IODE Management Group should oversee the process.

**Table 1: Preliminary NODC health status checklist (Version 1)**

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|  | **NODC Status Check** | **Comments** |
|  | The NODC contact point does not respond to e-mails/CLs/other communications, etc. | No response indicates that the NODC is not active. A timescale needs to be agreed – e.g. no replies received over the last two years for example. |
|  | If no response in 1. above, then contact NODC host institution or IOC Action Address. | If no reply, then NODC is considered inactive. A reply will clarify whether the NODC is active or inactive, and whether capacity development or other assistance is required. |
|  | Has the NODC participated in IODE Committee meetings? | Can be checked independently from list of participants. NODC could be considered active if a representative has attended the most recent meeting (or one of the last two/three meetings). |
|  | Does the NODC have a website with information about the NODC, contact points, services provided? | Request website address if not already known. Active website indicates an active NODC. Can be checked independently. |
|  | Has the NODC provided information about data held? | Request information from NODC on metadata catalogue, data holdings, data access, etc. No response could indicate NODC is inactive. |
|  | Does the NODC contribute to IODE global data projects (e.g. WOD, GTSPP, GOSUD, GODAR) and/or to OBIS (through its national/regional node)? | Can be checked independently with the project leaders. Need to agree a timescale – e.g. data supplied in the last one or two years. |
|  | Has the NODC contributed to ODIScat? | Can be checked with ODIScat. Need to agree on timescale (i.e. information last reviewed/updated one or perhaps two years ago). |
|  | Does the NODC participate in an ODIN (where there is one)? | Can be checked with the appropriate ODIN coordinator. |
|  | Capacity development plans and activities – has the NODC attended at OTGA training courses? | Can be checked independently against OTGA course attendance records. |

After discussions with the IODE Secretariat the preliminary list has been refined slightly to take into account how IODE is evolving. A scoring system has been added and some timescales suggested for the criteria. The changes are: Checks 1 and 2 have been combined as they are closely linked; Check 5 has been removed as it requires input from NODCs and is thus not an independent check and also can be covered by Check 7; and Check 8 has been removed due to the evolving situation with the ODINs and will be covered by extending Check 6 to include regional as well as global data projects. The refined and updated version of the health checks is shown in Table 2 (note checks have been renumbered). A number of outstanding questions and suggestions are highlighted.

**Table 2: Preliminary NODC health status checklist (Version 2)**

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|  | **NODC Status Check** | **Rationale** | **Comments / questions** |
| 1. | The NODC contact point does not respond to e-mails/CLs/other communications, etc. Followed up by IODE Secretariat contacting the NODC host institution or IOC Action Address. | No response from the NODC contact point may indicate that the NODC is not active. A timescale needs to be agreed – e.g. no replies received over the last two years.  If no reply from the host institution or Action Address, then NODC is considered inactive. A reply clarifies whether the NODC is active or inactive, and whether capacity development is required. | Currently the IODE Secretariat sends a Circular Letter every year or two years to the IOC focal points and for cases where there was no answer we follow up with emails to the IODE contacts concerned. This provides an independent check with the IODE secretariat holding the information.  Suggest that a positive response within past 4 years means that the NODC is active.  **5 points** for response from NODC or host institution/IOC Action Address. |
| 2. | Has the NODC participated in IODE Committee meetings? | Can be checked independently from IODE Committee list of participants/meeting report. An NODC could be considered active if a representative has attended the most recent meeting (or one of the last two meetings). | This depends heavily on financial capacity of the NODC. Further discussion needed on the period. For example, do we consider the past 2 sessions (4 years) or can they have participated 15 years ago and then not anymore? Initial suggestion is to give 1 point/session going back 10 years max (so the NODC could gain a **max of 5 points**).  Other questions needing discussion:   1. Will there be opportunities for remote participation in the future? That will help those who have no travel funds. 2. Should there be something included about responding to the IODE Survey? It’s possible that an NODC might respond, but be unable to attend the IODE Committee due to lack of travel funds. |
| 3. | Does the NODC have a website with information about the NODC, contact points, services provided? | Request website address if not already known. Active website indicates an active NODC. Can be checked independently. | This requires some manual work in checking for websites, or perhaps we could request the website address when checking the NODC contact point details?  **2 points** for an active website/up to date. |
| 4. | Does the NODC contribute to IODE global data projects (e.g. WOD, GTSPP, GOSUD, GODAR) and/or to OBIS (through its national/regional node)? Or does the NODC contribute to regional projects. | Can be checked independently with the project leaders/steering groups. Need to agree a timescale – e.g. data supplied in the last one or two years. | This is important. Suggest give **10 points.**  Questions:   1. What is the best way of allocating the points? Does the NODC get 10 points if it contributes to just one project, or should there be a scale? 2. What period should this cover? Is one to two years sufficient or should it be longer – e.g. 5 years?) 3. Is a list of regional projects needed? And are there contact points for these available?   Note: Need to check that the right answers can be obtained. For example BODC contributes to Argo and these data go to WOD, but because of the way they arrive from the Argo Global Data Assembly Centres, I don’t think that they are tagged with BODC - it is possible that they are NOC or just UK. |
| 5. | Has the NODC contributed to ODIScat? | Can be checked with ODIScat. Need to agree on timescale (i.e. information last reviewed/ updated or new entries added. 1 or perhaps 2 years ago). | Need to agree on timescale, i.e. for when information last reviewed/updated or new entries added. Maybe somewhere between 1 and 5 years?  Information will be in ODIScat and can be provided by the coordinator?  **5 points** for active contribution |
| 6. | Capacity development plans and activities – has the NODC attended at OTGA training courses? | Can be checked independently against OTGA course attendance records and information provided by the OTGA Coordinator. | As this is currently stated then Member States/NODCs that do not need the training are disadvantaged. However it can be re-phrased to include capacity development plans/activities as provider or recipient. Need to indicate how an NODC can get involved as a provider. Needs a timescale – maybe 5 years?  Assign **3 points.** |

The number of points for each health check is given in Table 2. This gives a maximum total of 30 points. It is suggested that if an NODC has fewer than 15 points it is considered inactive and remedial measures need to be taken. This would benefit from some further discussion.

As it is likely that the life of the Inter-sessional Working Group will be extended and strengthened with additional members at IODE-XXVII, hopefully this document can act as the starting point and the questions/comments below and in Table 2 discussed and resolved.

Are there other checks that should be included? For example, should there be a question about accreditation/QMF? In the future ODIS can be included – or perhaps check 5 (contribution to ODISCat) could be expanded to include Ocean InfoHub and ODIS.

Discussion is required about what measures can be taken if an NODC fails – and how it can be helped back to functionality, for some this will be possible, but for others maybe not. Possible tools to assist an NODC include: Manuals and Guides, OTGA training courses, twinning with active NODCs, regional cooperation, etc. There also needs to be a timescale for bringing an NODC ‘back to life’.

Table 2 above indicates who can provide the information for each criterion. Then the information would need to be compiled into a status report perhaps by the IODE Secretariat or Management Group (or a volunteer) and then could be reviewed (annually? biennially?) by the Management Group. Once the NODC health checks, scoring system and mechanism for assisting inactive NODCs have been resolved, a short document will be compiled describing the process.

Suggested outline of the document to determine the health of NODCs:

* Introduction
* Criteria for judging health of NODCs including scoring scheme
* How to deal with inactive or failed NODCs?
* Description of reporting mechanism

**Appendix 1: OBIS Node Health Checks**

Extract from:IODE Steering Group for OBIS (SG-OBIS), Sixth Session, 1-3 February 2017 Reports of Meetings of Experts and Equivalent Bodies, UNESCO 2017 (English), UNESCO, 27 pp. 3 annexes.

**Annex 2: OBIS Node Health Status Check and Transition Strategy**

First, OBIS nodes should operate under IODE as either IODE/ADU or IODE/NODC. As such OBIS nodes are a member of the IODE network.

The IODE Steering Group (SG) for OBIS evaluates the health status of OBIS nodes at each annual SG meeting, and considers an OBIS node as **inactive** when it meets any of the following conditions:

1. The OBIS node manager recurrently fails to answer the communications from the project manager or the SG co-chairs in the last 12 months

2. The OBIS node manager or a representative fails to attend (personally or virtually) the last 2 SG meetings without any written reason

3. The OBIS node does not have an IPT

4. The OBIS node has an IPT, but it has not been running for the last 12 months

5. The datasets in the OBIS node's IPT have been removed and not restored in the last 12 months (without any explanation)

6. The OBIS node has not provided new data for the last 2 years

The OBIS Secretariat prepares a health status check report of each OBIS node based on the six items above and informs the OBIS node manager on their status 3 months before the SG meeting.

At the SG meeting, the SG-OBIS co-chair will present the results of the OBIS nodes health status check report including a listing of the inactive OBIS nodes.

The SG-OBIS members representing active OBIS Nodes will make one of the following decisions:

1. Request the inactive OBIS node to submit a plan with actions, deliverables and times to improve their performance, within 3 months, to the OBIS Secretariat. This plan is reviewed and accepted by the OBIS-Executive Committee

Or

2. Provide a recommendation to the IOC Committee on IODE to remove the OBIS node from the IODE network.

In either case, the OBIS Secretariat will inform the OBIS node manager of the SG-OBIS decision, with a copy to the IODE officers and the IODE national coordinator for data management of the country concerned.

The IODE Committee is requested to consider the recommendation from the OBIS Steering Group and it may either accept the recommendation or request the inactive OBIS node to submit an action plan (option 1).

When the inactive OBIS node is removed from the IODE network, the SG-OBIS will ask whether another OBIS node is interested in taking over the responsibilities of the removed OBIS node, until a new OBIS node in the country/region is established.