**Report of the IODE Intersessional Working Group on the Health of NODCs**

25 January 2024

# INTRODUCTION AND BACKGROUND

The IODE Committee, through the Decision IODE-XXV.3.2.4 (February 2019), established an Inter-sessional working group (IWG) on the review of NODC health status within the IODE network. According to the Annex A of the Decision IODE-XXV.3.2.4 the objectives of the WG were:

(i) propose metrics and processes for determining the health status of NODCs in the IODE network

(ii) propose a process to assist NODCs in improving their health status

(iii) recommend updates to the IOC Manuals and Guides No. 5 as appropriate

(iv) submit an intermediate report to the 2020 meeting of the IODE Management Group

(v) implement a provisional health status check of all NODCs

(vi) submit its final report including the provisional health check report to IODE-XXVI (April 2021).

During the January 2020 meeting of the IODE Management Group it was recommended that IWG will propose the changes to IOC M&G 5 taking into account the following circumstances:

(i) disbandment of JCOMM

(ii) NODC and ADU relations

(iii) WDC system superseded by WDS

(iv) ODISCat and other data & information related IODE activities and projects

It was also proposed the following sample categories for the NODC metrics:

(i) amount of data received/processed/archived

(ii) data available online

(iii) metadata availability

(iv) QA/QC implemented

(v) long term preservation

(vi) interlinkages established with ADUs (if any)

(vii) IODE QMF

(viii) contribution of data to OBIS/ODP

(ix) contribution of information to ODISCat

(x) publications to OBPS

(xi) capacity development plans and activities

(xii) funding

(xiii) participation in the international projects

(xiv) sustainable operations strategy (if any)

As no action had taken place on this issue since IODE-XXV, the IODE Management Group, at its January 2021 meeting decided to establish a pre-committee Working Group (Group 1) on this subject. The Group met on 18 February 2021. It discussed necessary changes to IOC Manuals and Guides No. 5 and 67 and also recommended the drafting of IODE data centre health check procedures. Taking into account information and the checklist used by the OBIS Steering Group to check the health of OBIS nodes, the pre-committee working group suggested that it is valuable to be able to check the status independently and consider the full range of data management tasks of an NODC (see IOC M&G 5, page 5). Dr Lesley Rickards offered to prepare a short document with a preliminary checklist for the health status of NODCs for use by the inter-sessional working group. Some of the items require input from the NODC, but other items can be checked by IODE. Further work was needed to determine the NODC health check process, 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.

IODE-XXVI (April 2021), noting with regret the lack of progress, decided to extend the Inter-sessional working group on the review of NODC health status within the IODE network and instructed it to provide:

(i) a revision of IOC Manuals and Guides No. 5 (Guide for Establishing a National Oceanographic Data Centre);

(ii) a revision of IOC Manuals and Guides No. 67 (IODE Quality Management Framework for National Oceanographic Data Centres and Associate Data Units (Revised edition)); and

(iii) finalise IODE data centre health check procedures, for submission to the IODE Management Group for its January 2022 meeting.

IODE-XXVI instructed the Secretariat to publish and circulate the documents subsequent to their approval by the IODE Management Group. Dr Lesley Rickards (UK) informed the Committee at IODE-XXVI that the brief document referred to above was available to the IWG.

During the intersessional period between IODE-XXVI and IODE-XXVII (March 2023) the following work had been carried out:

* a revised version of IOC Manuals and Guides No. 5 (Guide for Establishing an IODE National Oceanographic Data Centre, IODE Associate Data Unit or IODE Associate Information Unit (3rd revised edition)) was published on <https://oceanexpert.org/document/30863>
* the revision of IOC Manuals and Guides No. 67 (IODE Quality Management Framework for National Oceanographic Data Centres and Associate Data Units (Revised edition)) was published in 2019 on <https://oceanexpert.org/document/12661>
* a revision of IOC Manuals and Guides No. 73 (Guidelines for a Data Management Plan) was published in 2022 on <https://oceanexpert.org/document/31418>.

However the IODE data centre health check procedures was not finalized as planned and was not submitted to the IODE Management Group held in March 2022.

At IODE-XVII it was noted that for a number of IODE NODCs and ADUs no response had been received to requests to update contact information (e.g. through IOC Circular Letter 2892 of 2 June 2022 and follow-up emails of 18 August 2022). In some cases, no contact had been made for over four years.

IODE-XXVII noted the slow progress on the IODE data centre health check procedures, although a short progress report was made available just prior to the meeting, decided to extend the “Inter-sessional working group on the review of NODC health status within the IODE network” for another inter-sessional period and instructed the working group to (i) provide a status report on the procedures to the IODE Management Group (2024); and (ii) finalize the procedures for submission to the 28th Session of the IODE Committee (2025).

IODE-XXVII:

1. instructed the IODE Management Group to take into account the procedures used by the SG-OBIS as a possible model in their deliberations.
2. invited experts to join the working group and welcomed Sissy Iona (Greece), Sheldon Carter (OBIS ADU ISA, Jamaica), Lotta Fyrberg (Sweden), Lennert Tyberghein (OBIS SG), Yang Jinkun (China) and Mark Hebden (UK) as members of the group. (Existing members were Ms Clousa Maueua (Mozambique), Ms Michèle Fichaut (France), Ms Lesley Rickards (UK) and Ms Susanne Tamm (Germany)).
3. decided that, once a year, the IODE Secretariat should send out an IOC Circular Letter to all IOC Member States, inviting them to designate or update information on IODE national coordinators (data management and information management) and update the list on the IODE web site.
4. noted the revision of IOC Manuals and Guides No. 5 (Guide for Establishing an IODE National Oceanographic Data Centre, IODE Associate Data Unit or IODE Associate Information Unit) and thanked contributors for their work.
5. noted the revision of IOC Manuals and Guides No. 67 (IODE Quality Management Framework for National Oceanographic Data Centres and Associate Data Units (Revised edition)) and thanked contributors for their work.
6. noted the revision of IOC Manuals and Guides No. 73 (Guidelines for a Data Management Plan) and thanked contributors for their work.

# PROGRESS SINCE IODE-XXVII (MARCH 2023)

The brief document, referred to above by Dr Lesley Rickards, was updated by Dr Rickards in July 2023 and the IWG was invited to take this document into consideration during its discussions. The IWG met online on 29 September 2023 and discussed and carried out revisions of the preliminary health status checks.

Mr Ward Appeltans introduced the Group to the health status check criteria of OBIS (<https://manual.obis.org/nodes.html#obis-node-health-status-check-and-transition-strategy>). He explained that 6 criteria were identified for OBIS. Some OBIS nodes struggle with one of the conditions (publishing data to OBIS). Other criteria include attending meetings, responding to emails, etc. Inactive nodes are contacted, followed by discussions. However, OBIS nodes that do not publish data can still be active in OBIS. A shift has been observed from publishing data as the main criteria to, for example, building capacity in a region. Thus it was concluded that the reality of local situations in the OBIS nodes need to taken into account when assessing health.

It was agreed that further reflection was needed to finalize the table, which was made available as a GDocs document for IWG members to provide further comments. Subsequently a discussion was held with Mr. Pissierssens to resolve outstanding questions and finalize a version for comment by the IODE Management Group. The resulting table (Table 1) is given below. There are 8 checks which can be independently verified. Points are allocated to each check with a maximum of 50 points. The Group suggested that if an NODC has fewer than 20 points it is considered inactive and remedial measures need to be taken; these will vary from NODC to NODC depending on the local situation.

**Table 1: Preliminary NODC health status checklist (Version 4)**

**(revised on 17 January 2024)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **NODC Status Check** | **Rationale** | **Comments** |
| 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.  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 to the IOC focal points and for cases where there was no answer this is followed up with emails to the IODE contacts concerned. This provides an independent check with the IODE secretariat holding the information.  Failure to respond to the Circular Letter and subsequent communications within the past 2 years means that the NODC is inactive.  **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 past meetings. | Give 1 point/session attended (either online, when available, or in-person) going back 10 years max (so the NODC could gain a **max of 5 points**). |
| 3 | Has the NODC participated in inter-sessional group activities including surveys | Can be checked independently through lists of participants in online meetings and associated reports | Give 1 point per event/survey in which the NODC participated within the past 2 years with a maximum of **4 points**. |
| 4. | Does the NODC have a website with information about the NODC, contact points and services provided? | Request website address if not already known. Active website indicates an active NODC. Can be checked independently. | As part of the IOC circular letter and contacting NODCs the URL of the NODC will be requested (and checked by the IODE Secretariat) and included in the IODE web site.  **2 points** for an active website/up to date (maximum 2 points). |
| 5. | Does the NODC website mention its role as an NODC in the IODE programme (with link to the IODE website) | Check NODC web site for reference and link. | **1 point** for a reference and link to IODE in the NODC web site (maximum 1 point) |
| 6. | Does the NODC contribute to/participate in IODE programme components, programme activities or projects. | Can be checked independently with the project leaders/steering groups and IODE Secretariat. | Give points if the NODC has participated in one or more IODE Programme Components, Activities or Projects **within the past 2 years**.  Participation is defined as: membership of a steering group, providing data or information on a regular basis (and can be verified), providing training during a training course or hosting an intern, etc.  Each “participation” results in **5 points, with a maximum of 25 points.** |
| 7. | Capacity development plans and activities – has the NODC attended any IODE training courses (OTGA). | Can be checked independently through OTGA. | Assign **2 points/course within the past 2 years with a maximum of 6 points.** |
| 8. | Does the NODC have accreditation (IODE or other)? | Certificate should be requested (for non-IODE accreditation)  Examples: CTS, Nestor Seal, ISO,…  For CTS, a list of certified repositories is available from their website (<https://amt.coretrustseal.org/certificates>) | Assign **2 points** |

Following placement on the “inactive” list by the IODE Committee, NODCs will be invited to take remedial action during the next inter-sessional period. Table 2 below lists the possible remedial action which could be taken – as with the OBIS checks the local situation will be taken into account in aiding inactive NODCs back to a more active status. Other possible additional tools to assist an NODC “back to life” include IOC Manuals and Guides, OTGA training courses, twinning with an active NODC, internship at an active NODC, regional cooperation. Prior to the next Session of the IODE Committee they will be invited to be removed from the “inactive” list. Their progress will be evaluated by the IODE Committee which may make a decision to remove the NODC from the list or to leave them on the list.

**Table 2: Possible remedial actions to be taken.**

|  |  |  |
| --- | --- | --- |
| **Item** | **NODC Status Check** | **Action to be taken** |
| 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. | * IODE Secretariat to contact head of the host organization to seek clarification and attempt to resolve the problem, possibly involving the IOC contact point. |
| 2. | Has the NODC participated in IODE Committee meetings? | * IODE Secretariat to contact the head of the host organization to promote IODE. * IODE to consider sponsoring participants through relevant extra-budgetary projects or through IOC CD travel grants. * IODE to consider making available on-line participation. |
| 3 | Has the NODC participated in inter-sessional group activities including surveys? | * IODE Secretariat to send multiple reminders. |
| 4. | Does the NODC have a website with information about the NODC, contact points and services provided? | * Seek assistance from other NODCs. * Seek training on web site development. |
| 5. | Does the NODC website mention its role as an NODC in the IODE programme (with link to the IODE website)? | * IODE Secretariat to urge NODCs to mention their role in IODE. * IODE Committee to urge IOC Member States to clearly mention IODE in their NODC web sites. |
| 6. | Does the NODC contribute to/participate in IODE programme components, programme activities or projects? | * NODCs to identify activities for which they have expertise and participate. |
| 7. | Capacity development plans and activities – has the NODC attended any IODE training courses (OTGA)? | * NODCs to check the OTGA web site for relevant courses and apply. |
| 8. | Does the NODC have accreditation (IODE or other)? | * NODCs to study requirements for accreditation and apply. * IODE Secretariat to provide guidance upon request. * Accredited NODCs to provide assistance upon request. |

# REQUIRED ACTIONS

1. The IODE Management Group (5-7 February 2024) is invited to comment on the proposed health checks and remedial actions to be taken to assist NODCs in improving their health status.
2. Subsequently a first provisional health status check of all NODCs will be implemented in 2024.
3. A revised version of this document (taking into account the experience with the provisional health status check) will then be submitted for approval to IODE-28 (March 2025).

**ANNEX I**

**List of Participants at IWG meeting held 29 September 2023**

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