Proposal for options to develop a web-based regional documentation of monitoring programmes

Background

Following-up conclusions of GEAR 3/2013, Germany and Finland presented a proposal for the structure and design of the HELCOM monitoring programmes to MORE 5/2013 (document 6/1). For background information and easy reference the document can be downloaded here: <http://meeting.helcom.fi/c/document_library/get_file?p_l_id=16324&folderId=2166235&name=DLFE-53428.pdf>.

MORE 5/2013 agreed to explore options to use a web-based manual and fact sheet approach at regional level in order to support decentralized reporting by HELCOM EU Member States of jointly prepared documentation of monitoring programmes under Art. 11 (3) MSFD. MORE invited Germany, Finland [and Estonia as part of the GES-REG project], assisted by any other Contracting Party, to prepare a proposal for GEAR and HOD on how a web-based manual could look like and how it could be implemented. The proposal should include financial and organisational implications and technical requirements to ensure implementation in line with the timing, substantive and technical requirements of the EU for those Contracting Parties that are also EU Member States. MORE 5/2013 agreed that a draft proposal should be sent to delegations of MORE and MONAS by 10 May 2013 with a request to comment to the task managers by 28 May 2013. The consolidated document should be presented to the drafting group meeting under the umbrella of DIKE in June 2013 and to GEAR 4 and HOD 41. Based on the output of the DIKE meeting a further consolidated proposal should be circulated to MORE and MONAS delegations for commenting.

The following proposal has been circulated to MORE and MONAS delegations by 10 May. Comments were received only from Germany and the proposal has been updated accordingly. In finalising the proposal, the recent document of the EU Commission in preparation of the WG DIKE Drafting Group meeting on 4 June 2013 has been taken into account: <https://circabc.europa.eu/sd/d/934bd314-6dca-48da-a28c-c2feb03b05d9/DIKE_DG-2013-02_ReportingOnMonitoringProgrammes.doc>

What is the timing for the proposed web-based documentation?

A clear distinction needs to be made between the establishment of the monitoring manual as a technical solution to presenting information on monitoring and the revision of the monitoring programmes as the substantive work to determine what to measure where and when. This document only refers to the establishment of the monitoring manual, with the aim to have this available by July 2014. It does not prejudice the process of revising (the contents of) and establishing new monitoring programmes which follows different and longer time lines and extends beyond 2014 (see Work Plan on the revision of the monitoring programmes for MORE).

*Message for the EU:*

If RSCs should be put into a position to develop a monitoring manual to support its Contracting Parties that are EU Member States in MSFD reporting in October 2014, any associated technical aspects need to be taken into account from the very beginning by the EU Consultant in developing xml schemata.

Why considering a HELCOM web-based monitoring manual?

The presentation of HELCOM monitoring requirements are currently scattered over a number of documents. While they are presented together on the HELCOM website for easy overview, the presentation is not very user-friendly. With the development of additional monitoring programmes (e.g. for biodiversity), consideration should be given to the efficient and clear presentation of HELCOM monitoring arrangements.

Art. 11 MSFD requires EU Member States to set up regionally coordinated monitoring programmes and to notify the EU Commission of the monitoring programmes. For national notification, the EU Commission works with EU Member States to establish an electronic reporting process which determines the information required by the EU Commission for the compliance assessment under Art. 12 MSFD and specifies the format (“reporting sheets”) for consistent and comparable submission of this information. See MSCG 10/2013/5 for the basic requirements on reporting on circab: <https://circabc.europa.eu/sd/d/6902dba0-53e4-4cf4-8483-689fc1daffdb/Recommendation%20for%20monitoring%20-%202%20May%202013.doc> which was endorsed by MSCG in May 2013.

According to MSCG 10/2013/5, “the reporting process for the monitoring programmes should be used to introduce the possibility (at this stage as an option) for Member States to publicly present information on their monitoring programmes in such a way that it can also be directly used for reporting at EU level. Such pre-defined information (e.g. presented as ‘fact sheets’) would need to be prepared in a structure that follows the reporting approach (based on what is outlined in this document [i.e. MSCG 10/2013/5]) and answers the assessment questions (such as those listed in Annex 1 [i.e. to MSCG 10/2013/5]). Also some of the information should be available in an interoperable format (e.g. xml file) so that it can be downloaded and used by the Commission (alongside equivalent reports from Member States who continue to report into ReportNet). Ideally, such 'fact sheets' would be designed in such a way that they also fulfil other purposes, e.g. for the work of the Regional Sea Conventions (RSCs), for national implementation and for the public consultation process.”

According to MSCG 10/2013/5 (see above), “[w]hilst the reporting of these programmes remains a Member State responsibility, it is possible for EU Member States to prepare the required reporting information jointly (such as within the Regional Sea Convention framework). This would have the advantage of clearly demonstrating to the EU Commission the level of coordination achieved (as the MS reports would hold the same information), and could potentially reduce effort as only one report per programme needs to be prepared for the sub(region) for all relevant Member States.”

*Message for the EU:*

The relationship of national reporting and regional documentation needs to be clarified. This relates to both the procedures and the contents. National and regional contents of fact sheets must be closely coordinated, avoiding duplication of work and contradictions and redundancies of information. The work flow from Members States and RSCs in relation to reporting to the EU COM under Art. 11(3) MSFD needs to be clarified as a priority.

The HELCOM web-based “monitoring manual” is a proposal for a jointly prepared documentation and presentation of the HELCOM monitoring programmes that can be used both for an efficient and user-friendly presentation of monitoring under the BSAP and, by HELCOM EU Member States, for EU reporting under Art. 11 (3) MSFD. It is intended to present the HELCOM monitoring activities and their specification in ‘fact sheets’ that are compiled and integrated into one web-based ‘monitoring manual’. As far as comparable monitoring manuals have already been developed or are under development by Contracting Parties, these should be taken into account or used as a basis for building a regional monitoring manual in order to capitalise on existing experience and efforts. The manual should allow EU Member States and possibly the EU Commission to “harvest” up-to-date information on monitoring programmes in an almost automated process.

*Message for the EU:*

The documentation for the WG DIKE drafting group meeting on 4 June 2013 appears inconsistent on the role of the ‘fact sheet’ approach in reporting. There is a need to clarify whether it is required that ‘fact sheets’ operationally link up with XML schemata or whether reporting can be successfully achieved through the submission of links to the web-manual. The following proposal is based on the assumption that information presented in ‘fact sheets’ would require extraction to XML schemata to be taken into account in formal reporting.

The relationship between formal MS reporting in a 6 year cycle and EU COM access to up-to-date information held in regional manuals any time in the management cycles requires clarification.

How to design the monitoring manual?

The web-based monitoring manual will need to compile all monitoring activities which are undertaken by HELCOM Contracting Parties in a coordinated manner. The HELCOM core indicators are the main building block for coordinated regional monitoring of Contracting Parties. Additional coordinated monitoring activities, e.g. for pollution loads or certain marine activities, also exist and should form a part of the regional monitoring programmes.

The web-based monitoring manual will need to follow a structure that meets the requirements of EU reporting and fits the structure of national monitoring programmes. The structure of the monitoring programme required by the EU will need to include

* a general section (chapeau) specifying the general concepts and principles of the HELCOM Monitoring and Assessment Strategy, taking into account the MSFD requirements
* a “programme” level relating to the BSAP themes and MSFD descriptors (i.e. eutrophication, hazardous substances, hydromorphology, biodiversity/components, litter, noise etc)
* a “sub-programme” level to address different information needs (e.g. related to state, pressures, activities and measures) in a structured way, which provides detailed information on monitoring strategies (e.g. indicators/parameters, monitoring network, frequencies, methods, QA).

The web-based monitoring manual will need to translate this structure into user-friendly web-pages with ‘fact sheets’. Work is under way by Contracting Parties in HELCOM to determine the structure and to identify the most appropriate level at which ‘fact sheets’ are to be prepared in order to provide detailed information on monitoring strategies. While HELCOM indicators may lend themselves to a fact sheet approach, fact sheets may also cluster indicators at sub-programme level. This is subject to further discussion, based on information on national monitoring programmes that Contracting Parties are invited to put forward through responding to a questionnaire by 31 May 2013.

*Message for the EU:*

The structure of the monitoring programme will be further discussed at the WG DIKE drafting group meeting on 4 June 2013. A common approach to the structure and the level at which ‘fact sheets’ should be developed will be essential to make technical implementation of electronic reporting possible. For example, should ‘fact sheets’ be deployed at indicator level or should indicators form an element of the sub-programmes? The relationship of sub-programme level and indicator level in terms of contents and technical relations need to be clear to enable the EU Consultant to translate contents into xml schemata. Continued interactive cooperation of the EU Consultant with Member States and RSCs will be crucial for successful technical implementation of schemata.

For the purposes of BSAP and MSFD, ‘fact sheets’ have to comprise all information on the design of the monitoring (sub)programmes. Work is under way by Contracting Parties in HELCOM MORE to determine the structure and contents of the ‘fact sheets’. For the MSFD, the ‘fact sheets’ will need to strictly follow EU requirements and answer the questions raised by the EU Commission for reporting under Art. 11 (3) MSFD. Technically, the ‘fact sheets’ will need to be designed in such a manner, that the contents match the prescribed fields and responses for electronic reporting. Thus, contents relevant for MSFD-reporting must be compliant with the technical requirements of reporting sheets to facilitate the transformation of information into XML schemata and interoperability at EU level. This is based on the assumption that for ‘formal’ reporting purposes, ‘fact sheets’ will need to link up with XML schemata.

The web-based monitoring manual should be designed in a user-friendly way for example to:

* provide a user-friendly interface to produce and update the information;
* include a map service for the monitoring station information;
* navigate through the manual and its monitoring fact sheets;
* view and download monitoring information in different formats (e.g. html, pdf);
* allow user-defined search, view and export of monitoring information; and
* allow controlled access, extraction and download of EU compatible formats for reporting purposes.

What are the technical requirements?

The technical requirements for the monitoring manual are still under development within the EU. The WG DIKE drafting group meeting on 4 June will give further consideration to the approach. A dedicated workshop in summer 2013 under the lead of Germany is supposed to help specifying technical options. Due to technical and formal overlaps between corresponding processes within HELCOM and the EU, these processes should be aligned to the extent possible.

As basic requirements the following tools have been recommended on the basis of a proposal on web-based monitoring manuals for MSFD reporting purposes, presented at the 7th DIKE meeting in March:

* the use of a content management system (CMS) as an up-to-date and comparatively inexpensive, flexible and well structured approach,
* the use of a database underpinning the CMS.

All standard CMS systems working with an underlying database (often MySQL, PostgreSQL, Oracle or similar) and often with PHP as programming language are potentially suitable. They offer various modules to filter and dynamically display information depending on interest and need. In addition to the HTML view, most CMS can generate associated PDF-documents. A prerequisite to meet the flexibility required for Art. 11 MSFD implementation is to allow creating several specific database-tables on monitoring information and to make the content available in a suitable format for the reporting (e.g. XML). To structure this information the same XML schema as for the reporting sheets should be used.

Setting up the system will require for example

* programming to structure information in the system and to relate it to XML schemata requirements;
* technical ability and programming to allow access and information flow, e.g. to allow EU Commission and EEA to “harvest” information in a safe environment;
* correct transfer of monitoring information into the system and validation processes.

What are the financial implications?

For software solutions, it is recommended to use open source products. This means that no investment is necessary on software. Efforts will include to set up the system, implement the manual contents into a CMS, programming capacity to technically enable the system for xml-formats and data exchange and maintenance and updates.

The HELCOM ITC system is currently being updated to incorporate a sharepoint platform that is based on a content management system. HELCOM is also in the process of modernising the HELCOM web pages. The sharepoint and the updated web pages structure can be used to make the monitoring fact sheets available both to the users as well as those being subject to reporting, e.g in relation to the EU Commission, EEA, etc.

There is planned to be a section in the public web site called “Monitoring and assessments” and the regional monitoring manual with the fact sheets should be located there. In addition to the html-format of the fact sheets and the reporting specific xml-format, there ought to be sheets that are easily printable by the users of the manual, e.g. pdf files. It will also be possible to insert interactive and downloadable maps to these pages such as the MORE monitoring overview map tool.

Programming capacity of [TO BE DEFINED BY THE SECRETARIAT AT A LATER STAGE] person/month will be required to make the system operational.

What are the organizational implications?

The proposed approach means that the monitoring manual becomes a formal part of national reporting under Art. 11 (3) MSFD for those EU Member States that make use of this option, and as such may have legal implications. This requires clear and detailed working processes within HELCOM to ensure that

* the contents of the fact sheets are agreed between HELCOM EU Member States and national approaches are harmonised to link up with the regional manual.
* the technical requirements for EU electronic reporting are fully met. This requires close cooperation with the EU Commission.
* the monitoring manual is implemented according to the time lines of EU reporting, i.e. it needs to be ready and tested so that it is fully operational by 15 October 2014. This involves responsibilities of the HELCOM Secretariat to ensure timely and correct transfer or accessibility of reporting information.
* clear procedures and work flows apply within HELCOM to set up, adapt and release ‘fact sheets’ in full agreement with Contracting Parties. National reporting (whether traditionally through reporting sheets or via ‘fact sheets’) should form the basis for the work flow.
* strict quality assurance processes apply on the contents of the ‘fact sheets’

Technical solution should be considered to assist efficient working processes and work flow between Contracting Parties and the Secretariat. This is especially important for those Contracting Parties which run or plan to run a national web-based monitoring manual in parallel. In those cases, information at regional and national level need to be prepared in close cooperation to ensure that it is adequate and that different language versions are compatible. Updates of the contents of the manuals must be performed in parallel to avoid differences in information and structure. Ideally updates are only done once with effect for both regional and national level information (e.g. if possible through automated synchronization procedures). It should also be guaranteed that the development of national and HELCOM manuals are done in close cooperation to provide as much coherence as possible and to avoid double work. One option to enable this is to make use of the WG DIKE “drafting group” umbrella for the purpose of coordination.

*Message for the EU:*

There is a need for early technical coordination of national and regional approaches in order to ensure that xml schemata are built in such a manner as to allow regional reporting. This includes considerations that schemata are module-based: regional fact sheets will probably only meet information needs for some of the modules while national fact sheets provide complementary information. Early involvement of the EU Consultant in the discussions as well as continued interactive cooperation of the EU Consultant with Member States and RSCs will be crucial for successful technical implementation of schemata.

Where should the monitoring manual sit in the existing HELCOM system?

HELCOM has experience with fact sheet approaches (e.g. Baltic Sea Environment (BSE) Fact Sheets). This will be expanded by the forthcoming core indicator reports. While there is a close link between indicators and other fact sheets with monitoring, it is recommended that all information on the design of monitoring programmes and strategies remain within the dedicated monitoring manual. For indicator reports or BSE fact sheets, a link can be provided to the relevant monitoring fact sheet for contextual information. For example, today the demonstration of eutrophication indicators on the HELCOM web-site includes buttons to link up with information such as assessment, concept, technical data, etc. A button or otherwise provided link to the monitoring manual (and the relevant fact sheet thereof) would ensure that monitoring and assessment information is kept close while keeping all monitoring information in one place for reporting.