

7th Meeting Technical Group Underwater Noise

23rd - 24th October, Hotel Slon, Slovenska Cesta 34, Ljubljana

Minutes

Participants: Mark Tasker, René Dekeling, Maria Ferreira, Lydia Martin-Roumegas, Michael Ainslie, Michel André, Mathias Andersson, Fabrizio Borsani, Tetricienne Box, Dónal Cronin, John Dalen, Thomas Folegot, Andreas Müller, Jukka Pajala, Stephen Robinson, Frank Thomsen, Predrag Vukadin, and John Young.

Invited participants: Monika Peterlin (Institute of Water of Republic of Slovenia), Ferdinand Deželak (Institute of Occupational Safety, Slovenia), Nina Uratarič (MORIGENOS), Antonio Coradin (Regional Agency for Environmental Protection of Friuli Venezia Giulia, Italy), Marta Picciulin (independent researcher, Italy), Nikolina Rako Gospić (Blue World Institute, Croatia) and Luka Curovic (Institute of Occupational Safety, Slovenia).

1. Welcome

Monika Peterlin welcomed the group on behalf of Institute for Water of the Republic of Slovenia. This was followed by round-table introduction of participants and a brief introduction by the newly appointed representative of EC DG Environment for TG Noise Ms. Lydia Martin-Roumegas.

2. Agenda and aim of the meeting

Chairs: Mark Tasker and René Dekeling

René D. presented the agenda and aims of the meeting, as follows:

- Exchange experience present TGN and Med/Adriatic initiatives
- Prepare report status/progress of noise in 2014 to MSCG/MD:

Contents (as earlier planned by chairs)

- Advice on review of CD
- Advice/conclusions on CEFAS contract
- Advice on standards/standardization
- Advice on implementation of monitoring/main issues
- Proposal for TOR of TG Noise 2015

The goal will be to produce a draft report status/progress that will be completed by 31st October 2014.

This report will include the results of agreements regarding the discussion points during the meeting, in particular:

- Concrete action on how TG Noise will make a contribution proposal and advice to MSCG regarding standardization;
- Further analysis and comments regarding the status of MS based on the D11 questionnaire responses that were discuss regarding current state and recommendations for the next cycle of the MSFD; and
- Discussion about the proposal for ToR of TG Noise for 2015.

3. Formal review of Commission Decision (CD) 2010/477/EU

By Mark Tasker

Presentation of the process of the advice on review of Commission Decision

Status: template delivered to ICES, WG GES, considered on 20-21 October

Main messages from WG-GES:

TG Noise were thanked explicitly for their hard work in supporting the Commission and Member States.

Main messages to WG-GES:

- MSFD has introduced requirement for EU member states to address noise (ecosystem scale, regional approach)
- Member States to set up a monitoring programme for underwater noise, to provide new, now unavailable information
- Pressure indicators; relation between pressure/state/impact needed
- For impulsive noise, most relevant effect and knowledge needs identified, knowledge base needed for management/policy is growing, may be sufficient progress for new MSFD cycle
- For ambient noise, progress probably insufficient for next MSFD cycle:
 - MS should give priority to set-up ambient noise monitoring –DG ENV should address MS to raise the priority to start implementation of monitoring;
 - currently there is no long term ambient noise monitoring process in place, except from project based like BIAS which may provide in 3-5 years' time information
- Noise monitoring not started, inventarisation finished, TG Noise to assess results and provide advice on obstacles and way forward
- **Present two indicators address the main identified concerns, starting monitoring of these indicators should get priority**

Future actions:

- 28/11/2014: WG GES comments to JRC/ ICES on contents of templates, to DG ENV on cross cutting issues and Annex III
- 28/11/2014: DG ENV provide guidance (MSCG/Marine Directors will provide advice/views by end of 2014)
- 21-23/01/2015 Cross-cutting issues workshop, Copenhagen (this will address the 11 MSFD descriptors and is expected to be quite helpful for MS and all working groups to align and understand how the 11 descriptors relate to each other and can be better addressed.
- After Cross-cutting workshop (21-23/01/2015) and until 25/03/2015: further work on the review templates by ICES/TG Noise
- 25/03/2015: Final draft to be delivered to DG ENV by ICES. This will include additional revisions by TG Noise

TG Noise discussion and conclusions on additional information for CD:

- The Commission Decision should only include core advice and information and should not define details or provide guidance, it is important to make clear that the Commission Decision should be read alongside with the guidance documents and additional information. Action: Mark T. and René D.
- If there are inconsistencies and relevant information missing from the guidance (e.g. DE comment on guidance regarding the noise frequency), then it could be part of the Work Plan of 2015 to produce a clear interpretation. Action: Andreas M. and Michael A. (2015)
- René D. suggested that further clarification on the choice of the two 13 octave bands might be needed. This issue was also raised during the International Whaling Commission (IWC)

workshops discussions that included US participants. The IWC group made a proposal for frequency bands and other alternatives.

- Mark T. noted that discussions about frequencies bands took place previously and information is available in the TG11 reports. Jukka P. suggests that since no further data were available, perhaps this decision could be revisited when there will be baseline information as expected from the BIAS project in 5 years' time.
 - Decision: proposal to include clear arguments for the proposed noise frequency bands but not introduce changes. Action: Mark T. and René D.

Additional note by René D. about the current advice process OSPAR: ICG is coordinated by OSPAR secretariat and addresses 3 main activities:

- Assistance to set up a register for impulsive noise, lead by UK
- Proposal for ambient noise monitoring, led by NL (René D.), and
- Provision of possible mitigation measures, led by DE

TG Noise will be kept informed of the developments in OSPAR ICG Noise.

3. Update on ongoing initiatives (focus on Med. / Adriatic initiatives):

All presentations are available upon request.

Underwater noise monitoring experiences in Croatia, *by Predrag Vukadin*

Assessing the effects of leisure boating noise on bottlenose dolphins of the Cres - Lošinj archipelago (northern Adriatic Sea, Croatia), *by Nikolina Rako Gospić, PhD Science Director Blue World Institute, Croatia*

Three years underwater acoustic monitoring in the gulf of Trieste (Northern Adriatic Sea, Italy): experience and results of ARPA FVG following an MSFD approach, *by Antonio Codarin, PhD Regional Agency for Environmental Protection of Friuli Venezia Giulia (ARPA FVG)*

The underwater background noise in the Trieste Gulf with reference to possible impact on local fish fauna, *by Marta Picciulin, PhD Independent Scholar*

4. Assistance on implementation of Monitoring Guidance: Standardization

Item 7. of the Work Plan: update and feedback about the actions done and agree on follow-up actions regarding draft new work Item proposal; potentially advice to MSGC Marine Directors

Standardisation timeline 2015-2021:

- 2015: finalise ISO 18405:2015 Underwater Acoustics - Terminology
- 2015: start development of joint ISO/IEC terminology standard
- 2015: start development of measurement standard (best done jointly by ISO/IEC)
- 2016: start development of modelling standard (ISO)
- 2017: start development of monitoring standard (ISO)
- 2017: start review of ISO 18405
- 2018: publication of joint ISO/IEC terminology standard (in ISO)
- 2019: finalise modelling standard (ISO)
- 2020: finalise measurement standard
- 2020: finalise ISO standard 18405:2020
- 2021: finalise monitoring standard (ISO)

Action: Text draft for progress report that will include the findings on the need for and way ahead towards an International Standard for monitoring underwater noise. Authors Michael A, Andreas M., Jukka P., Stephen R. (and Thomas F. confirmed interest to contribute during conclusions on 2nd day).

The draft text will address in detail the following issues:

- State the advice and agreements of TG Noise regarding the ISO proposal to be approved at ISO meeting in June 2015.
- To make use of the interim advice guidance of BIAS standards (Jukka P.)

- It is critical that a lead coordinator/chair of the Standards Group be found soon
- Members of TG Noise from Croatia, Germany, Netherlands, Sweden, and UK expressed an interest in participating in the development of an international underwater noise monitoring standard. Andreas Müller announced his intention to organise an international workshop about standardisation, to be held in Germany (no exact date agreed)

5. Update work under the Framework contract ENV.D2/FRA/2012/0025

Item 6. of the Work Plan: Review of work under the EC Contract "Noise Propagation and Impact" Action 3. Propose a roadmap towards defining sound limits for GES, presented by Fabrizio Borsani CEFAS; summary of main results; conclusions /advice from TG Noise to DG Environment / MSCG Marine Directors.

Fabrizio B.: presentation

37 participants from various backgrounds and organizations and 5 international experts attended the technical workshop in April. As a result the proposed text for Draft Roadmap has been drafted. Fabrizio B. explained that the proposed actions should be a sort of recipe book about what needs to be done and how, including a proposal on funding possibilities and timeframe required in order to be as cost effective as possible. Action 4 – we should be able to draw more concrete in this action as assessment framework and or management frameworks. René D. highlights much more knowledge available that can be included in this report – it is a missed opportunity.

Project timeline: Project will conclude end November. The next version to be submitted to EC DG ENV is due on 31st October. Then after comments received from EC DG ENV the final version submission will be on 28.11.2014.

Proposed actions / conclusions:

Only few comments received from TG Noise René D. will identify the logical part for the knowledge gaps so that it can be made visible if needed at higher level.

Fabrizio B.: minor comments changes can be done in the report now.

René D.: will draft brief text regarding the roadmap report with main conclusions to be included in the TG Noise report for MSCG. Propose to not make another list of research needs but instead to make a logical set of priorities of research needs, following the OSPAR approach. Use this information from CEFAS report as criteria to prioritize in the advice to Marine Directors.

6. Document on criteria for additional indicators & Review

Item 2. of the Work Plan: feedback from WG GES meeting on 20-21 October and agree on follow-up actions;

Item 5. of the Work Plan: review information available and agree on follow-up actions

René D. introduced the document as submitted to GES. The aim of this document was to propose the rationale for selection of GES criteria.

TG noise suggests the following selection for GES criteria:

1. **Scale:** The scale of impact deriving from the introduction of energy **is at a large scale** rather than at a local scale or there is a concern that such impacts will occur at large scale in the near future.
2. **Evidence of impact (or long-term impact):** There should be **evidence** of a persistent impact) on the marine ecosystem, on populations or on habitats or ecosystem services, or indication of potential persistent impacts or irreparable damage at these scales.
3. **Added value:** The activities introducing the energy in the environment and their cumulative effects should not be already **fully** regulated under other EU-regulations, or **monitoring and assessment should deliver added value** because e.g. it enables assessment of potential cumulative impact caused by different activities (not necessarily restricted to noise/energy).

Condition: These 3 criteria should ALL be met by any new proposed indicator: if a source of introduced energy meets all 3 criteria, it could be proposed to be taken up in the revision of the Commission Decision for the next implementation round of the MSFD (e.g. 2018-2026).

GES meeting comments and discussion:

- Some conflicting comments, regarding the selection criteria some MS said that at least 1 criteria should be met. But TG Noise defends that all 3 should be met. The same applies to indicators.

- What is meant by large-scale e.g. would Gulf of Bothnia count as regional or local?! The scale selection criteria needs clarification
- Finally, regarding evidence – also the masking of 11.2 is there as potential but evidence has not been proven

Comments from TG Noise:

- Thomas F.: Scale issue better maybe can be re-phrase as the extent of scale of impact of the activities. Change accepted and text revision (René D.)
- Thomas F.: highlights that more details regarding activities that are **not fully regulated under other EU environmental regulations**. Mark T. explained that at least one MS mentioned that their national regulations don't include noise in their regulations so it seems they don't comply with existing EU obligations.
- Lydia suggests to check the definitions as outlined in MSFD in particular the term to use reg. impacts and what concerns the evidence of impacts. Further EC welcomes to prioritize works for the actual process of GES decision revision..
- Regarding new indicators: Clarification regarding the MSFD remit (marine waters environment, pressure and impacts) package to address in integrated framework as WFD and their difference regarding other directives as EIA as the two directives act at different levels.

New indicators: Applying the selection criteria¹

In table below present indicators and a number of indicators that may be considered when determining the utility and applicability. The present indicators would score high when these criteria are applied. These potential new indicators were also described in the 2010 TG11 advice.

Energy source	1. Scale	2. Evidence	3. Not yet regulated/ other added value	End score
Loud, low and mid frequency impulsive sounds	+	+	±	+
Continuous low frequency sound	+	+	+	+
High frequency impulsive sounds Frank T.: to check whether useable info available	±	-	+	TG Noise 2014 report
Electromagnetic fields (from submarine cables) Frank T. and Mattias A., and to check whether useable info available and John Y to review available info in US	-	-	+	TG Noise 2014 report
Heat release René D to revisit TG 11 report / Jukka P. to review available information on Baltic Sea	-	+	- (regulated in other EU dir. Eg.EIA)	TG Noise 2014 report
Light (by offshore structures): Info: about scale evidence with affect in marine Fabrizio B. info about bridge of MESSINA strait	±	±	+	TG Noise 2014 report

Advice from TG Noise for draft report preparation:

Frank T.: can provide evidence from running project reg. **electromagnetic fields (and High frequency impulsive sounds)**: proposes to liaise with Danish colleagues to seek for literature to supply info to fill in the table: check selection

About scale of impact: is it real large-scale: How large is the area affected by the cables / impacted?! There are no studies done/evidence on impacts. Need to involve the expert leading in this field: names can be suggested: action by Mattias A. and Frank T.

Conclusions (and actions on timeline table):

René D. will lead the redrafting work for the report and will include information to be received as in table above if available now. This can be included if provided in short term regarding 3 selection criteria otherwise chairs will add that this will be set in the final report advice to GES in 2015.

¹ Most information is taken from the TG11 report (Tasker *et al* 2010).

Regarding the heat release indicator, it has been concluded that there is not sufficient new information and no evidence of a wide-scale impact, so does not qualify as new indicator. In any case Jukka P. will provide info from Baltic Sea.

7. Assistance on implementation of Monitoring Guidance: Questionnaire

Item 8. of the Work Plan: presentation of initial assessment and agree on follow-up actions and advice from TG Noise on implementation available in summary assessment document, as presented by René D. (version revised and included in progress report 14-11-2014).

8. Advice to MSCG and Marine Directors: outline on items to be included in report

- Agree on/draft contents
- Advice on review of CD -
- Advice/conclusions on CEFAS contract
- Advice on standardization
- Advice on implementation of monitoring/main issues
- Proposal for TOR of TG Noise 2015
- Agree on actions needed to finalise report

Advice to MSCG and Marine Directors - Timeline:

- Draft version: 29th October for TG Noise
- Delivery contributions: 28th October
- Comments: 30th October
- Final version: **3rd November to EC** Deadline to finalise report based on **MSCG Meeting 14 November**, comments for endorsement by MD (27/28 November)

	<i>Task</i>	<i>Lead and group</i>	<i>Deadline</i>
✓	Intermediate advice to MSCG & Marine Directors: Agree on/draft contents to include (points 1- 5 below) based on PPT working group GES	<u>René, Mark, Maria</u>	
1	<u>Advice on review of CD</u> Minor revision, to fit within the timetable, and comments to be received by GES	<u>Mark, René, Maria</u>	29 th October
2	<u>Advice/conclusions on CEFAS contract:</u> (Project will concludes in end November – final submission date 28.11.2014) Chairs will draft/ assess 2 pages max, reg. CEFAS roadmap final version including endorsement and advice.	<u>René, Mark, Fabrizio</u>	29 th October
3	<u>Advice on standardization:</u> Text is being prepared by Michael A. and team to be provided to chairs, early next week Timeline to be agreed	<u>Michael Ainslie (lead), Stephen R, Andreas M, Jukka P., René D., Thomas F.</u>	28 th October
4	<u>Advice on implementation of monitoring/main issues</u> Draft text in summary assessment as discussed during meeting (RD) New version of responses to be circulate with discussion on summary during meeting	<u>René, Maria, Mark</u>	29 th October
5	<u>Proposal for TOR of TG Noise 2015</u> To include: Completion of advice on templates	<u>René, Mark, Maria</u>	29 th October
6	<u>Review for criteria for additional indicators:</u>	<u>Frank T, Mattias A., John Y., Jukka P.</u>	27 th October

	Task	Lead and group	Deadline
	High frequency impulsive sounds FT: to check whether useable info available Electromagnetic fields (from submarine cables) FT and Mattias A., and to check whether useable info available and John Y to review available info in US Heat release RD to revisit TG 11 report / Jukka to review available information on Baltic Sea Light (by offshore structures): Info: about scale evidence with affect in marine FB info about bridge of MESSINA strait 2 parts to be prepared: first part for inclusion in the draft report with fundamentals and explanation about the selections criteria; and 2 nd part to be included later with reference to the argumentation	<u>Fabrizio B.:</u> (additional information to be provided) <u>René Thomas</u>	29 th October
6	Agree on other actions needed to finalise report	<i>Done above</i>	

Proposal for TOR contents of TG Noise work in 2015: Items to be included:

- Completion of advice on template of revision of CD following advice of EC DG ENV and members of the MSCG;
- Exploration for setting up and register of impulsive noise
- To continue support the process of standardization as appropriated, including the workshop proposed by Germany
- To continue assistance on implementation of Monitoring Guidance
- To promote sharing of experiences and stock-take knowledge and information gained by ongoing initiatives (e.g BIAS, Aquo) at regional, national and international level

9. Next TG Noise meetings – proposals:

- TG Noise meeting proposal to be held in ICES (Copenhagen): end September / mid-October 2015. Action: Mark T.
- TG Noise (restricted group to attend) workshop in Germany: related with the interim process of standardization. Action: Andreas M.
- Conference in 2015 in Barcelona 11-15th May: OCEANOISE 2015 <http://oceanoise2015.com/>. Invitation to all group (most already invited). Action: Michel André

10. Conclusion of the meeting:

The meeting was closed at 12.00h by René and Mark, thanking all participants for the positive and pleasant work in Slovenia. On behalf of the group many thanks to Monika Peterlin for the Slovenian hospitality, excellent venue and support. The work of TG Noise is appreciated and therefore should continue to provide support to MS in their work. Thanks to the group!

Participants list : 7th Meeting TG Noise 23-24th October 2014, Ljubljana, Slovenia

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