

**FINAL MINUTES**  
**EC Technical Subgroup (TSG) Noise – Fifth Meeting**  
**12 and 13 February 2013**

SYKE, Mechelininkatu 34a, Helsinki, Finland

**Participants:** Michael Ainslie, Michel André, Fabrizio Borsani, John Dalen, René Dekeling, Leo de Vrees, Thomas Folegot, Jukka Pajala, Stephen Robinson, Gerry Sutton, Mark Tasker, Frank Thomsen, John Young, Sandra van der Graaf, Dietrich Wittekind, Penina Blankett and colleague (attended 1<sup>st</sup> day), Samuli Korpinen (HELCOM attended 2<sup>nd</sup> meeting day), Maria Ferreira and Remment ter Hofstede.

**Not present:** Mathias Andersson, Maria Boethling, Karsten Brensing, Alexander Liebschner, Mary Meacle, Stefanie Werner, Albert Willemsen, Russell Leaper, Peter Sigray, Manuel Castellote.

**Tuesday, 12 February 2013**

**1. Welcome**

Jukka Pajala who organized the meeting at the Finnish Environment Institute (SYKE) introduced the research director Juha-Markku Leppänen. Mr. Leppänen welcomed TSG Noise to the SYKE and made a brief presentation of its activities and monitoring programme, stressing the need for guidance on establishing a monitoring programme.

**2. EU process and the role of TSG Noise for 2013**

Before providing an update on the state-of-affairs of the EU process, Leo de Vrees , European Commission (EC), briefly introduced the consultants Maria Ferreira Coastal & Marine Union, EUCC) and Remment ter Hofstede (ARCADIS-NL) who had just started the contract to provide administrative, logistical and technical support for TSG Noise (and TSG Marine litter).

Leo de Vrees thanked the representatives of Finland for organizing the meeting and expressed his gratitude for the high attendance at the meeting. He outlined the status of the Member States (MS) reports to the EC that should have been received by 15 October 2012. Up to now, 15 countries reported on articles 8, 9 and 10, however only half used the reporting sheets, 3 MS have missing elements in the reporting and 4 MS have not reported at all. The EC is currently checking completeness, coherence, consistency and accuracy of the reports with the support of consultants as reports and assessment sheets are usually submitted in the MS national languages. Finally, the assessment will be sent back to the MS for further clarifications and finalization.

Leo de Vrees reported that some MS are indeed making progress and have started to work on their monitoring programme and set of measures, therefore the EC in cooperation with the Spanish Ministry of Agriculture, Food and Environment have offered to host a workshop on monitoring underwater noise under MSFD in May this year.

This meeting should discuss progress and the path to completion and dissemination of the guidance report,. The consultants will help in this task. It is most important to have clear guidance to support MS preparations towards the design a monitoring plan and programme in 2014.

Leo noted that a possible revision of the Commission Decision (CD) on indicators would need to be prepared by 2016 latest.

**Task: The group needs to finalize the guidance report to present the recommendations and specifications of the guidance in advance to the workshop that is planned in Madrid in May (27-28<sup>th</sup>).**

### **3. Agenda and aim of the meeting**

Chairs: **Mark Tasker** and **René Dekeling**

The chairs noted that the overall aim of this meeting was to discuss issues related to the finalization of the guidance report. In addition the workshop planned for Spain in late May and the future should be discussed.

### **4. Monitoring guidance for Impulsive Noise (M1)**

Discussion points:

- a. *Still discussion on one chosen approach for **thresholds for the register**: use of low threshold+ additional information*
  - i. *Intention: ensuring no relevant sources excluded without being too precautionary (but conservative)*
  - ii. *If we take this approach some of the additional information is essential*

Paragraph **2.3.1** of the guidance report should cross refer to Chapter 5 of the document in order to make distinctions between levels of noise so to be able to make an assessment of all the sources of noise.

In the discussion the following points were noted:

- Comments were made regarding the inclusion/exclusion of sources. A balance has to be struck of being reasonably cautious while not being unnecessarily burdensome on administration. If information is too difficult to collect, it is likely that there will be patchy uptake in the Member States meaning that an overall assessment becomes impossible.
- There is reasonable confidence in the scientific basis of source levels, and therefore of activities that need to be registered.
- A further look at the practical issues around collating information of the 4/5 activities may still be needed as rather few Member States have established noise registers so far.
- The text should change "all pile-driving activities" to "all impact-pile-driving activities" (e.g. pile driving with continuous vibrations could be excluded).
- The guidance report chapters 1-4 will be short and stand-alone, section 5 will be an annex with details. Leo de Vrees confirmed that 12 pages is the maximum limit for translation by EC.
- The use and the type of data required for the noise register needs to be clear and take into account differences in implementation of EC legislation. It has been agreed to include guidance on the use of the registry and the threshold for the sonar should be also included in the register.

*Discussion/agreement on other information to be collected, and identifying which is essential, and is it practicable*

- The draft list was written for sonar information, but may not be applicable for other sources. The entry for 'directivity index' should be removed, mainly what relates to air guns; for sonar this parameter is relevant. The other information may be useful, however focus should be on register and therefore such a list should be in the appendix not the main part of the guidance.
- General agreement that the 'source level' (in e.g. 10dB bins) is essential.
- Conclusion: Source level is recommended (and remains in this chapter) the others are desirable (and will be included in the annex).

*b. What should be done with others sources: sparklers/boomers etc.*

- The inclusion of sparklers and boomers needs to be logical: if these are to be included then advice must be clear as to why.
- Mark T. (lead), Michael A., John Y.; and Gerry S. will be responsible for completion of this text

*c. Agreement to distinguish between multiple/single explosions, and then clarification*

- Due to the rarity of multiple explosions (less than 8g), the group decided that separate thresholds for uptake in the registry of single or multiple explosions was not needed. Whether the explosions were single or multiple will be recorded in the 'desirable' section. [Comment of Rene D: See chapter 5.1 and the reference to Southall et al., who decided to distinguish between single and multiple pulses. The threshold for inclusion will be chosen on the basis of treating all explosions as single explosions. The text on this (in 5.1 at least) may need clarification.]

*d. Definitions: change of interpretation (not 0-pk but SL) proposed. Confirm this is better and that we do not continue changing definitions*

- Guidance for registration of impulsive noise deletion: "*The proportion of days and their distribution within a calendar year, over geographical locations whose shape and area are to be determined, and their spatial distribution in which either the monopole or dipole energy source level (in units of dB re 1  $\mu\text{Pa}^2 \text{m}^2 \text{s}$ ), or ~~the zero-to-peak~~ monopole or dipole source level (in units of dB re 1  $\mu\text{Pa}^2 \text{m}^2$ ) of anthropogenic sound sources, measured over the frequency band 10 Hz to 10 kHz, exceeds a value that is likely to entail significant impact on marine animals (11.1.1).*"
- It has been agreed that there's a mismatch between the text and the proxies, linking text is needed to clarify the interpretation. Michael A. and Stephen R. will lead the drafting.

*e. Discussion on method for targets – impulsive noise –was only briefly discussed in Dublin. Little input so far*

- The section should be rewritten and should reflect the progress TSG Noise has made. The section is not guidance but should raise awareness on what can be done with the register. The text should not include concrete proposals. Action to be led by Sandra van der Graaf and others.

*f. Proposal for the register proposed by Mark Tasker to be introduced and further discussed.*

- There is a first proposal for the register, but should be much more concrete, what data goes in, what is the format and how enable automatic data collection.
- TSG can define the overall concept for the register and its design. Leo clarified that it is not expected that TSG Noise will design a database that is ready for use. TSG Noise should provide a concept that includes relevant information-fields as well as a manual on how to use the register.
- A group led by Mark T., Gerry S., Michael A., Rene D., Peter S. and Mathias A. will work on a concept including fields and priorities, based on UK example.

***See also list of actions and deadlines pages 8 and 9 (updated 11.03.2013)***

## **5. Monitoring guidance for Ambient Noise (M2)**

### **Discussion points:**

- a. *Monitoring section: advice on which information is needed (trends or more), what level of detail and when it should be working*
- b. *The advice on measurement stations remains unspecific, many considerations, but no clear guidelines (numbers?)*
- c. *We should provide some clear conclusions/recommendations on measuring and modelling. Clear that a combination of both is needed.*
  - Conclusions of discussion items a, b and c: There is consensus about the fact that Trends will be the complicated part to deal with, so TSG Noise could propose a different approach. It was noted that the measures to be proposed cannot be detailed. TSG Noise will provide guidance based upon existing experience: examples from regional seas include the BIAS soundscape categories and the BRISK (Sub-regional risk of spill of oil and hazardous substances in the Baltic Sea) map from Baltic Sea. The examples could be used to suggest where to place monitoring stations and guidance on how to measure and model anthropogenic contribution to ambient noise. TSG Noise will recommend that MS monitor jointly at a regional sea scale.
  - The re-edited part of the guidance will include an illustration with an example. Editing to be done by a group led by René D. Chapter 3.4.2 also to be edited by René D. and consultants (other actions detailed in the table on page 11 and 12)
- d. *Averaging: good progress, but conclusions/recommendation should be sharper: including advice on handling loud transients which are not addressed sufficiently*
  - Example from the entrance to Cork harbour has been used to demonstrate data analysis and averaging This example and the graph should be included as demonstrations of statistical analyses that can help to define trends.
  - Further the required research for dealing with the current uncertainties should be described in the report. Action Michael A. and Michel A.
- e. *Any other points?*
  - Proposal to change measurements units by Michael A. on page 15: it has been concluded to all 10khz would be changed to 20khz. Mark T added commented that this change should be a suggestion and not a recommendation with logic and reasoning.

***See also list of actions and deadlines pages 8 and 9 (updated 11.03.2013).***

## **6. Completing the monitoring guidance**

Inputs for the report and points of attention on Ambient Noise: Jukka Pajala presently briefly the latest BIAS project information that will be included as an Annex in the guidance report as case study. The case study should include the logic behind why specific locations have been chosen.

A definition of the structure for the file to hold the data, including its metadata is required. Fabrizio B mentions that CEFAS is already setting up such a file. Thomas F, Fabrizio B, Stephen R will draft a section for the report Annex on this.

### ***General structure of the Guidance:***

TSG Noise concluded that the guidance will be divided into 3 parts:

- **Part 1: maximum 12 pages.** A synthesis focussed on recommendations, clear messages, a concise version that will be translated in the MS national languages.

- **Part 2:** Guidance Specifications (not more than 40 pages): this must be complemented by the annexes, explanation of technical terms, with internal hyperlinks, all examples and clear information
- **Annexes:** Detailed information and explanation

Finally the meeting agreed the authorship of the report. Requirements for authorship are:

- o Members of TSG, and
- o Attended meetings and contributed to the report

The list will be alphabetically, with the chairs up front. Authors that should be included (that were not in version 2) are: Castellote, Wittekind, and possibly also Werner (to be checked by Rene D.). In the report a proposal for a citation will be included.

Samuli Korpinen from HELCOM who attended the meeting on day2 will review the draft edited version. This is particularly appropriate as HELCOM are a part of the target audience.

TSG Noise Chairs will prepare a new "clean" version and split the guidance report in Part 1 and 2.

*Summary on decisions and deadlines: **See tables in following pages as prepared and agreed by the TSG group during the meeting.***

## **8. Work Programme 2013-2014**

Rene D summarised TSG Noise's progress against the Terms of Reference (ToR):

Once the monitoring guidance is completed then ToR 1-5 will be complete.

ToRs still needing to be addressed are:

### **B. Assist in future target setting**

- 6) TSG Noise will develop a guidance addressing several ways in which MS may and describe GES in future and set targets including, where possible, examples.

### **C. Other tasks**

- 7) Assessing the need and developing additional indicators on high-frequency impulsive sounds and electromagnetic fields

These two types of energy were prioritised in 2011 by the TSG Noise. In 2012 a proposal for an indicator and a justification for addressing these sources should be developed and presented to the WG GES.

- 8) Identify indicator species for defining thresholds for the different impacts (e.g. physical injury and relevant displacement as regards impulsive sounds; zones of masking as regards continuous sources)

- 9) Develop guidance on acoustic mapping for area-specific sound budgets and species-specific impact areas.

- 10) Collect further information on the impact of impulsive noise and ambient noise and on cumulative noise effects

- 11) Develop recommendations on noise reduction and mitigation measures.

## **6th meeting of TSG Noise**

- Place: Slovenia? Italy? Greece? Southern or Southeastern Europe and Easy to reach. *Contacts to be check y Leo de Vrees*

- Date: 9/10/11 October? 17/18 October? **23/24** October : preferable dates

Chairs work out ToR for next meeting, based on this list and discussion at the meeting

- How can we use data for GES and future target setting? (B6)
- How to assess? Assessment scales, aggregation? (A continued)
- How do you use these two indicators in deriving consequences to biota? Risk-assessment. (C8/9/10) Michel
- Measures (C11)
- New technologies? Monitoring of the future?
- Sound map for Europe?
- Discuss plan for meeting 7 and 8

Think about other people participating

In terms of further meetings, TSG Noise is considering:

#### **Meeting 7 (early 2014 – if needed)**

- Focus on development of Additional indicators for new Commission Decision
  - (high-frequency impulsive sounds)
  - (electromagnetic fields )
  - Other?

#### **Meeting 8 (mid-2014)**

- Final advice for review of Commission Decision
  - Reformulation present indicators
  - New criteria and associated indicators (if necessary)
  - Final report

### **7. Preparation of workshop**

In order to disseminate the work of the TSG Noise to MS, a training workshop is being planned for 27 and 28 of May in Madrid, Spain with support of the Ministry of Agriculture, Food and Environment.

A document for the WG GES meeting that will take place on 4-5 March needs to be prepared to announce the workshop to MS.

The workshop will be organized at the premises of the Ministry of Agriculture, Food and Environment in Madrid during 1 day an half on 27-28<sup>th</sup> May: starting on Tuesday 15h-18h, and Wednesday 9-17h

The programme will be designed to provide an overview and background about the work of TSG and the guidance reports and will also include technical presentations and practical / project examples to illustrate. The participants are expected to range from policy makers to technical managers responsible for setting up the monitoring programme.

TSG Noise considers that those in MS wishing to understand recommendations and make decisions to implement Noise Monitoring for MSFD purposes would find the workshop useful. The workshop will not go ahead if there is insufficient interest by 1 April 2013. It is expected that feedback at the workshop will be used to finalise the Monitoring Guidance.

See table with actions and deadlines page

**Any other business:** TSG Noise group agreed that the terminology should be used coherently. The Technical Subgroup acronym is: TSG Noise.

## **UPDATE 11.03.2013 Work package TSG Noise February/March 2013 – for finishing monitoring guidance and workshop**

### **General Timeline:**

- **Version 3: 21 February**, including comments on Version 2 as a basis
- **Delivery separate parts: 15 March**
- **Version 4: 22 March** (comments on content before 5 April)
- **Version 5: 15 April** (comments only on editorial items until 22 April)
- **Final version: 1 May**

### **A) General**

	<i>Task</i>	<i>Lead and group</i>	<i>Deadline</i>
✓	Version 3	<u>Mark, René</u>	20 February
<b>1</b>	Put more text from Chapter 5 in part 2 in order to make it a stand-alone report. Chapter 5 = Annex - add motivation and reasoning, explain logic	<u>René, Maria, Remment</u>	22 March
<b>2</b>	Verify that text will be understandable by target audience	<u>Maria, Remment, Samuli</u>	22 March
<b>3</b>	Short summary/recommendations for MS – Part 1	<u>Remment, Maria, René, Mark, Sandra</u>	22 March
<b>4</b>	- Acknowledgement for people who are not in TSG Noise, Dietrich Wittekind, Leo de Vrees, and editors - Include Manuel and Stefanie in autorlist (if they agree) - Make chairs first author (Dekeling, Tasker) - Proposed citation	<u>Maria, Remment</u>	22 March
<b>5</b>	Add in Annex author list	<u>Sandra</u> All: check	22 March
<b>6</b>	Review document for technical things (units, etc)	<u>Michael, John D</u>	Between 5 April and 15 April

### **B) Monitoring guidance for impulsive noise**

	<i>Task</i>	<i>Lead and group</i>	<i>Deadline</i>
1	Write an introduction explaining the logic behind the forward and backward looking parts of the register and what they are based on	<u>Mark</u>	1 March - Not received
2	Par 2.3.1: Description of impact pile driving	<u>Stephen, Michael</u>	15 March
3	Par 2.3.1: Justify why we did not include additional sources (sparkers, boomers, etc)	<u>Mark, Michael, Gerry, John Y., René</u>	15 March
4✓	Par 2.3.1: treat all explosions as single explosions	<u>René, Michael</u>	10 March
5	Par 2.3.1: Agree on units for airgun	<u>Michael, John Y, René, John D</u>	10 March – in progress
6✓	Par 2.3.2: Move list of 'desirable'	<u>Maria, Remment</u>	10 March

	source properties to the Annex. List Source Level as 'highly desirable'		
7	Par 2.4: rewrite paragraph, show progress, no concrete proposal. Add examples	<u>Sandra</u> , Remment, Maria, Frank, Gerry, Thomas, Manuel	10 March – in progress
8	Register: show progress on work on forward looking register, no concrete proposal: <ul style="list-style-type: none"> <li>- develop conceptual design,</li> <li>- define fields,</li> <li>- add mandatory/highly desirable/ nice-to-have</li> </ul>	<u>Mark</u> , René, Michael, Gerry, Remment, Peter Sigray	1 March - not received

### **C) Monitoring guidance for ambient noise**

	<i>Task</i>	<i>Lead and group</i>	<i>Deadline</i>
1	Include example on monitoring locations from BIAS, short paragraph in main text and in Annex	<u>Jukka</u> , Peter	15 March / part of action 3
2	Add key message: MS should work together in basins/(sub)regions	<u>Maria</u> , Remment	22 March
3	Edit text based on discussion: <ul style="list-style-type: none"> <li>- Explain logic</li> <li>- manual for modelling</li> <li>- guidance on measurement</li> <li>- recommendation for regional coordination</li> <li>- example</li> </ul>	Remment, Maria, <u>René</u> , Thomas	22 March
4	Averaging: put graph from Thomas in the report and text to explain	<u>Thomas</u> , Frank, Michel, Michael	15 March
5	Averaging: provide recommendations on research regarding transients	<u>Michel</u> , Michael	15 March
6	Equipment: add recommendation on how to store data & desirability of future standard? Infrastructure installation	<u>Thomas</u> , Fabrizio, Stephen, Michel	15 March

### **Other work items:**

<i>Task</i>	<i>Group</i>	<i>Deadline</i>
Progress report to WG GES	<u>Sandra van der Graaf</u> , Mark Tasker, René Dekeling, Remment, Maria	18 February
Develop programme for workshop	<u>Maria</u> , Remment, Mark, René, Sandra	Draft 22 March, Final 12 April
Develop Basecamp website (or other platform) and manual how to use it	<u>Maria</u> , Remment, <u>All</u> : use it!!!	10 March
Rewrite report after workshop (if necessary)	<u>Maria</u> , Remment, Mark, René, Sandra & others (depending on items that need reviewing)	1 June

### Training Workshop TSG Noise: 27/28 May 2013

	<i>Task</i>	<i>Lead and group</i>	<i>Deadline</i>
	Invite MS at WG GES and ask for participants before 1 April	<u>Leo</u>	5 March
	Decide on whether the workshop takes place or not	<u>Leo</u> , Mark, René	12 April
	Organisation	<u>Remment, Maria</u>	27 May
	Presentations	Mark, René, Thomas, (mediterranean), Peter (BIAS), Stephen/Michel (equipment), ...	To be determined
	Offers for help	Michael	